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**DOCUMENTS**  
**OF THE**  
**S E N A T E**

**OF THE**  
**STATE OF NEW YORK**

**ONE HUNDRED AND THIRTY-NINTH SESSION**

**1916**

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**VOL. IX. — No. 21 — PART 2**

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**ALBANY**  
**J. B. LYON COMPANY, PRINTERS**  
**1916**

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STATE OF NEW YORK

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DEPARTMENT OF AGRICULTURE

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TWENTY-THIRD ANNUAL REPORT

OF THE

Department of Agriculture

For the Year Ending September 30, 1915

PART II

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TRANSMITTED TO THE LEGISLATURE JANUARY 15, 1916

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ALBANY  
J. B. LYON COMPANY, PRINTERS  
1916



# STATE OF NEW YORK

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No. 21

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## IN SENATE

JANUARY 15, 1916

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### TWENTY-THIRD ANNUAL REPORT

OF THE

### DEPARTMENT OF AGRICULTURE

#### PART II

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*To the Honorable the Legislature of the State of New York:*

In accordance with the provisions of the statutes relating thereto, I have the honor to transmit herewith the Twenty-third Annual Report of the Department of Agriculture of the State of New York, for the year ending September 30, 1915

CHARLES S. WILSON

*Commissioner of Agriculture*

*January 15, 1916.*



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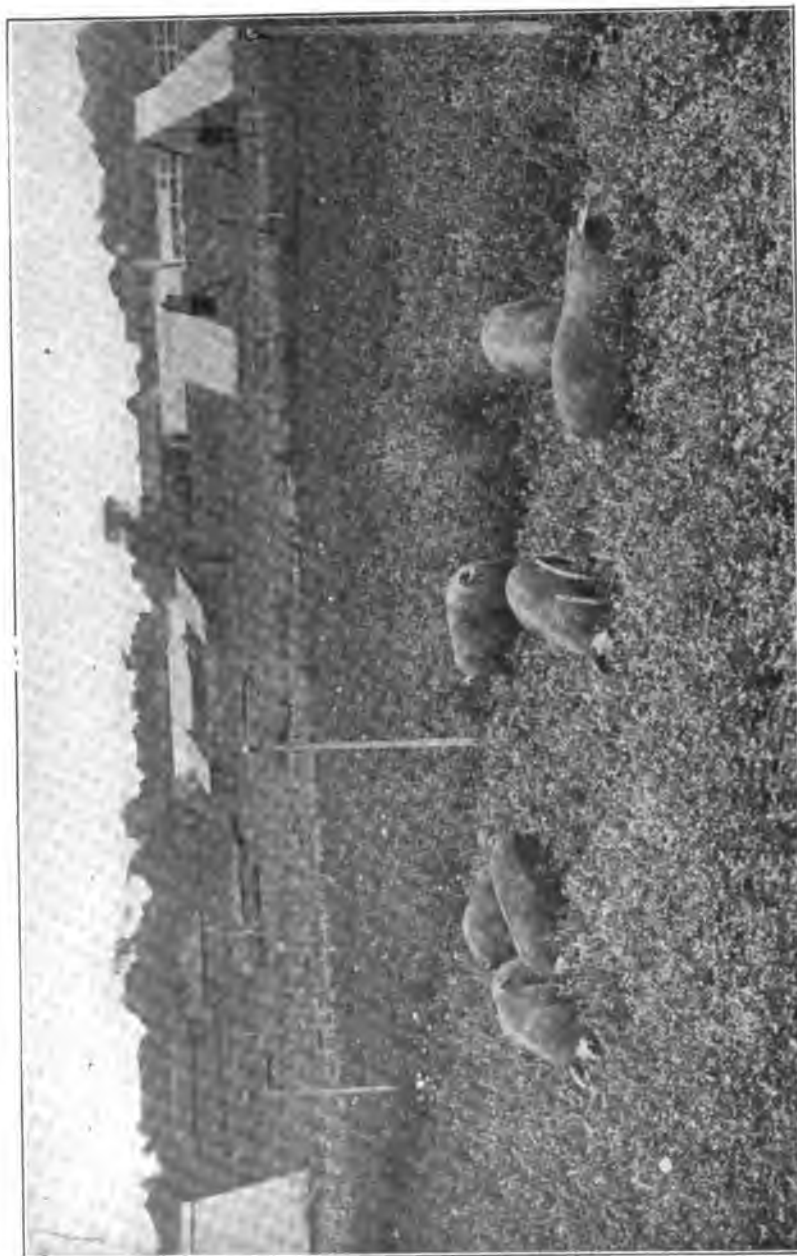


FIG. 1.—PIGS IN ALFALFA PASTURE AT NEW JERSEY AGRICULTURAL EXPERIMENT STATION, NEW BRUNSWICK, N. J.

**STATE OF NEW YORK**  
**DEPARTMENT OF AGRICULTURE**

**CALVIN J. HUSON, Commissioner**

**Bulletin 64**

**The Swine Industry in New York State**

**Issued by the Bureau of Farmers' Institutes and Compiled under the  
Supervision of the Director**



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## INTRODUCTION

Although New York State agricultural interests are varied, and profit can be obtained from all of them in larger or smaller amounts if they are intelligently handled, among them live stock will always have an important place on many of our farms. First, because with proper conditions there is a direct profit to be derived therefrom. Second, stock are utilizers of many of the cheaper, more bulky farm crops — some of them with little or no market value, which raw material fed to the stock may be marketed as a more nearly finished product, particularly advantageous on farms more distant from the market or those not so easily tilled. Third,—and very important—their voidings when properly cared for are one of the best, if not the best source of fertility, supplying both available plant food and organic matter. Well-bred and intelligently-cared-for stock should not only make a profit, but the manure from them should be clear gain in addition. Fourth,—with the high price of meats sure to be maintained—stock which are primarily meat-producing animals should and will command an increasingly larger place in our agriculture.

It is the aim of the Commissioner of Agriculture to foster all lines of agriculture, but more particularly those which have been neglected and which are susceptible of being developed with profit to our farmers.

Of our live stock, none may be made more profitable than the lowly, too often despised swine. Doubtless, no stock are so much neglected nor cared for and fed with so little regard to the laws of their being.

The rather small margin of profit to the dairyman is often due to the supply of dairy products being so nearly equal to the demand. Might it not then be wiser to diversify and in many cases reduce the number of cows — thus decreasing the supply of milk — and devote more care and feed to swine, of which it is stated on good authority there are not enough in the state at any one time to supply the citizens thereof with pork products for more

than thirty days? Why send our good dollars — too many of them farm dollars — out of the state to the middle West to pay for pork products raised on land worth from \$100 to \$150 an acre and pay transportation for one or two thousand miles, when on our cheaper lands we can grow many crops well adapted to swine fully as advantageously as in the section referred to, often using our by-products in this way to the very best advantage? While we may not be able to grow corn as cheaply in a large way, we can — if we will — grow more bushels to the acre.

This bulletin has been prepared and is being sent out at the special request of Commissioner Calvin J. Huson — himself a most successful swine breeder — to stimulate an interest and give specific information along the line of pork production. It is hoped that it may be of material assistance to those already engaged in the business and be a guide to many more who may with profit take up this branch of animal husbandry — at least as a side issue.

The compiler would express his appreciation for the work of those who have so willingly contributed the subject matter for this bulletin, particularly to Dean Davenport and Professor Minkler from outside the state.

## PRINCIPLES INVOLVED IN BREEDING SWINE

EUGENE DAVENPORT, URBANA, ILL.

Dean and Director of Illinois College of Agriculture and Experiment Station

While the points involved in pork production are to some extent peculiar to the business, the principles governing the breeding of swine are no different from those controlling the mating of other classes of animals. Because of the difficulties of selection, the points involved should be reduced to the fewest possible consistent with actual demands, which means the practical elimination of fancy points.

Thickness of meat, fulness of loin and ham, width of chest denoting lung capacity sufficient to support the hard labor of meat-making, together with sufficient bone to support the excessive weight — these are the chief considerations on which selection is based when the object is economic meat production.

### SELECTION

Other things being equal, the animals that possess the qualities just enumerated are the most promising breeders. But in practice other things are not equal, for it has been clearly shown that the chances for realizing our ideal depend no more upon the immediate parents than upon the ancestors back of them. More specifically, and in general, if half the ancestors back of the parents possess a given fault, the chances that the same fault will appear in the offspring are one in four, if a large number of individuals are taken into consideration, no matter how perfect are the parents. Stated in other terms, any fault in the line offers a possibility of its reappearing, the degree of probability reducing with the remoteness of the ancestry in which it has appeared. The perfectly correct inference is, therefore, that the value of an animal as a breeder is in general dependent upon the purity of his blood, by which is meant the constancy of type. It is not enough that breeding has been confined to lines within the breed.

## IDEAL

The breeder must have in mind a clear-cut ideal of what he desires to accomplish, else he will not persistently select to a purpose and the type will remain inconstant and unreliable.

This ideal need not be completely filled out, but is all the better if it stops with certain essential factors, such as flesh, loin, ham, chest, vigor and bone,—the fewer the better; for, as details multiply, the difficulty of finding all desirable qualities in one individual increases rapidly, not to mention the added uncertainty of being able to find another animal to match it, or back of either to find a line sufficiently consistent to warrant mating with much hope of success.

Moreover the swine breeder is concerned, not with a single pair, but with a herd of females more or less dissimilar and a sire that will mate in a promising fashion with the lot. In practice, therefore, the breeder will get on best if he devotes his attention to a single quality at a time until it is fairly fixed by three or four generations of breeding; that is, until those individuals that are likely to wander from the type are more than two or three generations removed from the proposed mating.

During this period of building up a selected quality, it will be practically necessary to disregard all other points, but at the same time to see that nothing too faulty is permitted to build itself into the blood while the desirable quality is being "fixed." The first point having been made fairly stable, the development of the next can be taken up, and so on with the perfecting process. If things go well, this need not take long. Should the breeder be fortunate enough to start with blood so good that two or three points can be secured at the same selection, then so much the better, and the progress will be correspondingly more rapid, but many a breeder has progressed backward by trying to handle too many characters at once.

## UNITS OF BREEDING

The point which we note and select for, such as vigor, for example, may not be a real unit, physiologically speaking, but rather the resultant of many body processes. In most cases we



FIG. 2.—NATURE'S TYPE.



FIG. 3.—MAN'S IMPROVEMENT BY HEREDITY AND ENVIRONMENT.

do not yet know enough about the real units involved to select with scientific accuracy, but rapid progress is being made by means of control experiments.

Certain problems in breeding have been marked out in our laboratories, but experimenters have necessarily confined themselves to certain species of animals easily handled in confinement and cheap enough to admit of indefinite multiplication, such as mice, flies and chickens. Moreover, the experimenters have limited their efforts to characters comparatively simple, such as color and sex, from which they have been able to show that the behavior of animals in breeding follows a perfectly regular order but that the series arising from given lines of mating is in general exceedingly complicated. In other words, that which, with our present state of knowledge, we call a "character," or a "point," is probably made up of many factors. The breeders' hope has been that all these factors will continue to act conjointly and descend in an unbroken group to the offspring. As a matter of fact, it is now known that they will not necessarily descend in bulk unless they have long been associated, and that purity of blood is a much more meaningful phrase than we once supposed. The following illustrations from the work of Dr. Detlefsen, Geneticist at the University of Illinois, as arranged by Mr. Elmer Roberts, show what is meant at this point. (See Figs. 4 and 5.)

Fig. 4 is a case in which only two characters are involved and their behavior is very simple when compared to the behavior of the four characters involved in Fig. 5.

From these illustrations, it is clear that appearance is not an index to the make-up of the individual. In Fig. 4, the first offspring are black. They, however, do not breed true to black, for among their offspring are to be found black individuals and white ones.

A more striking example of this fact is to be seen from Fig. 5. Among the offspring of the crossbreds not only are the two parental forms recovered, black ticked with yellow, and brown unticked, but two absolutely new forms, black unticked, and brown ticked with yellow, have arisen.

The obvious conclusion is that we greatly need specific information about the important characters of swine, as we now have of a

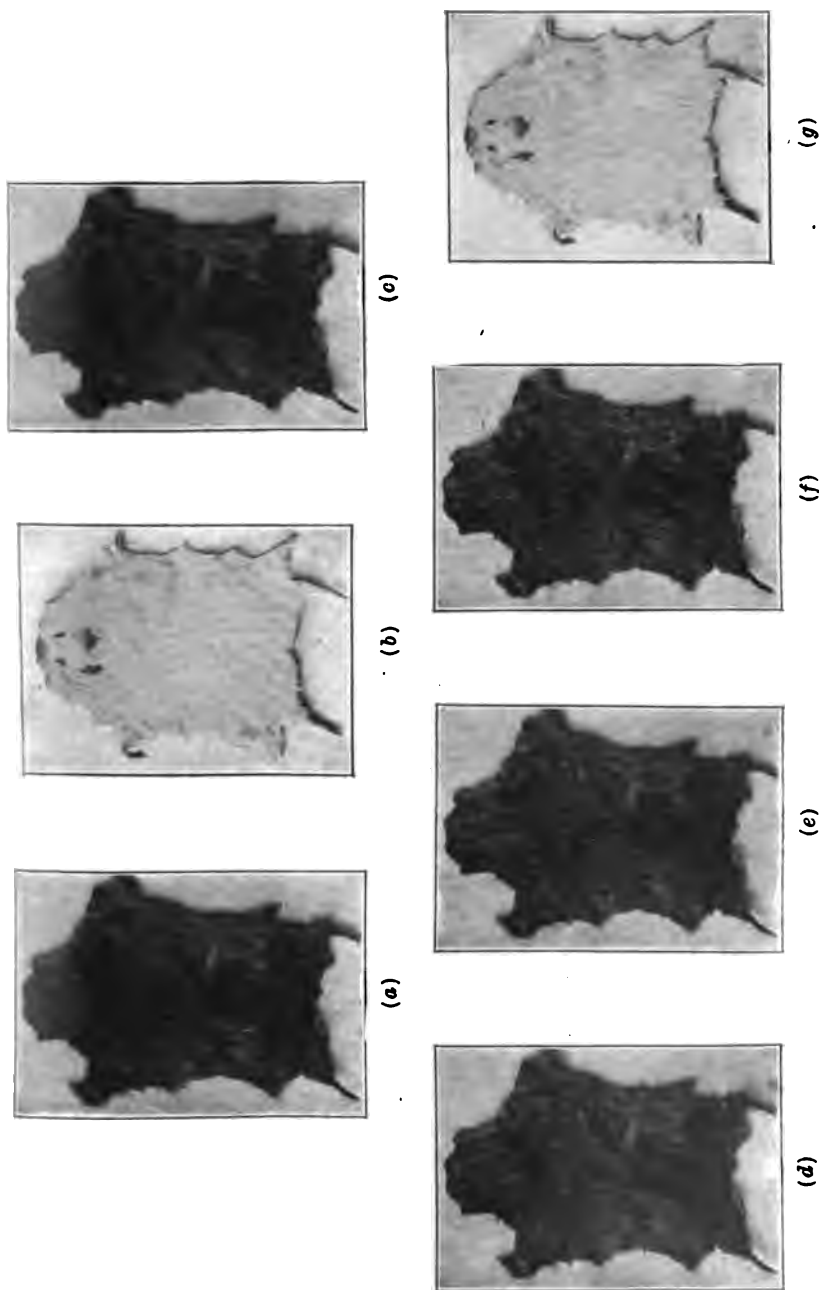


FIG. 4.—GUINEA PIG SKINS SHOWING RESULT OF BREEDING WITH TWO CHARACTERS INVOLVED.

When a black guinea pig (a) is mated to a white one (b), the offspring are all black as in (c). Black is dominant to white. If these crossbreds are bred together, the young produced are of two colors, black (d, e and f) and white (g); and if produced in large numbers, the ratio is three blacks to one white.

few characters of certain laboratory species; that this field must be worked out by the investigator; but that in the meantime the practical breeder will do well to simplify his operations as much as possible, at least until such time as our knowledge is considerably extended and refined.

It is almost certainly best with the present state of knowledge to confine our efforts in swine breeding to such fundamental considerations as have been mentioned; namely, flesh, especially loin and ham, bone and chest that indicate the vigor necessary to support the excessive demands of the pig in action.

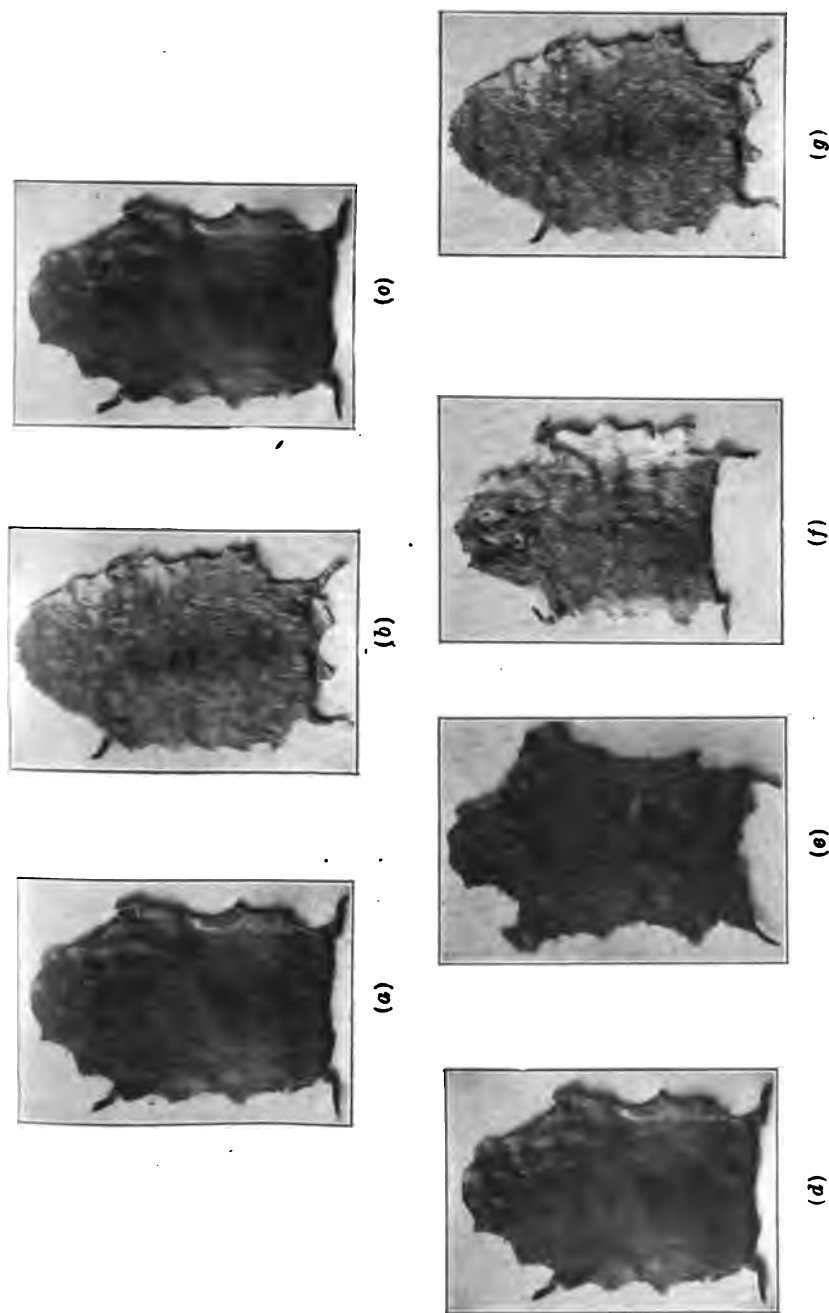


FIG. 5.—GUINEA PIG SKINS SHOWING RESULT OF BREEDING WITH FOUR CHARACTERS INVOLVED.

When a guinea pig having black hair ticked with yellow (a) is crossed with a guinea pig having unticked brown hair (b), the offspring have black hair ticked with yellow as in (c). Black is dominant to brown and ticking dominates to non-ticking. When these crossbreeds are bred together, they produce four kinds of individuals, black ticked with yellow (d), black unticked (e), brown ticked with yellow (f), and brown unticked (g). Further, if the offspring are produced in large numbers, then different forms exist in the ratio of 9 black, ticked with yellow, 3 black unticked, 3 brown ticked with yellow, and 1 brown unticked.

## HOUSES AND ENCLOSURES

H. B. HARPENDING, DUNDEE, N. Y.

Breeder of Berkshire Swine



The use of so-called hog houses for the breeding herd or store hogs is of very doubtful value as compared with a system whereby the hogs are maintained upon range with pasture the year around and housed in colony houses located within such pastures. The two types of houses commonly used are the A-shaped pen and the shed roof or Bonham pen, the general forms of which are shown in the accompanying illustrations.

### THE A-SHAPED PEN

The A-shaped pen should be 7 feet high at the peak with sides built from 16-foot boards cut in two; a depth of 10 feet with a width at the bottom of 7 feet will give a well proportioned pen. It should be battened with three-inch boards one inch thick. Any thinner battening will crack, pull apart and prove unsatisfactory. On the front and rear ends there should be removable doors hung with pin hinges, and the pens intended to be used for farrowing should be provided with small windows on hinges placed above the south doors. In the summer, both doors may be removed and fastened up inside the roof of the pen out of the way by cleats. During the spring, fall and winter, the north door should be put in place and 2 x 4 inch fenders placed across the north end on the inside to serve the double purpose of protection to the young when the pen is used for farrowing purposes, and to prevent the larger animals springing the door. The south door is not required except when sows farrow in severe weather. A fertilizer sack stiffened with barrel staves or boards may be tacked to the top of the south doorway, but even this protection is unnecessary except in most severe weather.

The pens should be floored, the best plan being to place the boards one-quarter to one-half an inch apart. This pen will comfortably house fifteen pigs weighing 100 pounds or ten or twelve shoats ranging from 150 to 200 pounds each. It is a most satisfactory farrowing pen and is especially adapted for use in the coldest weather. At such times, the south door should be put in place and the pen well banked with coarse manure on all but the south side. If the weather is extremely cold, it is best to hang one or two lighted lanterns in the peak, fasten both doors shut and keep track of developments through the window, which may be



FIG. 6.—A-SHAPED PEN.

opened slightly for ventilation. The lanterns will furnish sufficient heat and all but young sows with their first litters are better without interference. At Highwood, several litters have been farrowed in January and February in pens arranged as above described, with the thermometer ranging from 15 to 25 degrees below zero. When sows, particularly the young ones, are permitted to farrow their litters in a hog house with the surrounding pens occupied, and feeding going on twice a day with the attendant noise and confusion, the sows are disturbed and there is consequent loss. Breeders who have tried individual pens for this purpose continue their use.



FIG. 7.—SHED-ROOF OR BONHAM PEN.

## THE BONHAM PEN

The shed-roof or Bonham pen as shown by illustration, faces the south and should be from 12 to 14 feet long east and west with a depth of from 6 to 8 feet and 5 or 6 feet high in front and  $3\frac{1}{2}$  or 4 feet high in the rear. This is a good, practical form of colony house and will nicely house fifteen or twenty shoats. The door should be placed at the east end of the south side and extend from the floor to the roof. It need not be put in place unless the pen is used for farrowing. During the winter months a bag or canvas should be tacked across the upper part of the doorway stiffened with a board along the bottom to prevent tearing by the hogs. It will be better if the south side of this house is cut in two lengthwise (see Fig. 8) and strong hinges placed so that the upper half may be dropped down in season and on bright days in the winter to admit sunshine. This pen should be floored and the roof may be constructed of boards well battened or with shingle or patent roofing. It may readily be built on larger proportions to accommodate twenty or thirty shoats.



FIG. 8.— LARGE SHED-ROOF PEN.

All colony houses should be placed facing the south and at the opposite end of the lot from the feeding trough. This arrangement will compel exercise, and the manure will be more uniformly scattered. Air-slaked or hydrated lime should be frequently scattered about the feeding places.



FIG. 9.—A MOVABLE SHELTER HOUSE.

## PERMANENT HOG HOUSES

ELLIS M. SANTEE, M. D., CORTLAND, N. Y.

The modern piggery is conveniently located, on well drained ground; is so constructed as to conserve labor, best save liquid



manures, give greatest amount of comfort to its occupants and to be easily kept clean. Concrete is an ideal material if properly used. The walls should have air spaces to keep out moisture, the floors should be insulated for the same reason and there should be plenty of light and ventilation. There should be a feeding alley the entire length of the building; and, to be economical, there should be pens on either side of this alley. On the

average place one side may contain the farrowing and fattening pens, without yards, and the other the pens for brood sows and growing pigs, with convenient yards. A house of any pretensions will contain a feed room, fitted with cooker and storage conveniences. Running water is a great convenience and an abundance of water is a necessity.

### ROOF

The most economical building will have a monitor roof, which permits low side walls and the location of the windows and ventilators between the upper and lower roofs, away from harm.

### PENS

The swinging front to each pen solves a number of problems, such as getting the stock in and out easily, convenience in cleaning and a comfortable way of feeding while the hogs wait until the attendant is ready to let them eat. A very convenient size is eight feet wide and ten feet deep.

## SLEEPING QUARTERS

There should be separate sleeping quarters for each pen, or at least a wall six inches high to keep the bedding in place and give the occupants the privilege of keeping clean. Most hogs will keep their sleeping quarters clean if given the opportunity; and, if their sleeping rooms are clean, they will keep themselves clean. The separate room with a six-inch threshold is preferable, as it enables the attendant to keep them out of mischief while he is cleaning the pens.

## FLOORS

The floors may be insulated by burying tar felt roofing in the concrete. They should have a grade of a quarter of an inch to the foot and should be made as rough as they can be floated, to prevent slipping. Those of the sleeping quarters should be higher than those of the pens and graded toward the threshold, which should have an opening to carry off the water when cleaning the one occupied by the hog that is a hog—without character and not keeping clean when given the incentive.

## DRAINAGE

The hardest problem to solve is that of saving the liquid manures. Probably the best solution is a concrete pit at the rear end, built under ground to prevent freezing and the escaping of bad odors, and having all gutters leading to it as open as possible. Where they must be closed they should be not less than four inches in diameter and so constructed as to be easily cleaned. The gutter should have a grade of not less than a quarter inch to the foot, which, in a long building, requires that it be covered in all but the first two pens. This cover may be made of plank, sunken slightly below the surface so that the hogs can not root it out of place, and it should be easily removable. When new it should be a half inch narrower than the opening, as it will swell badly at first. Near the pit this gutter should be provided with an open trap having a plug at the bottom, to carry off to a drain the rinsing water used when cleaning pens, thus preventing the needless addition of bulk to the contents of the pit. The pit has to be cleaned of its solid matter about once a year and the liquids

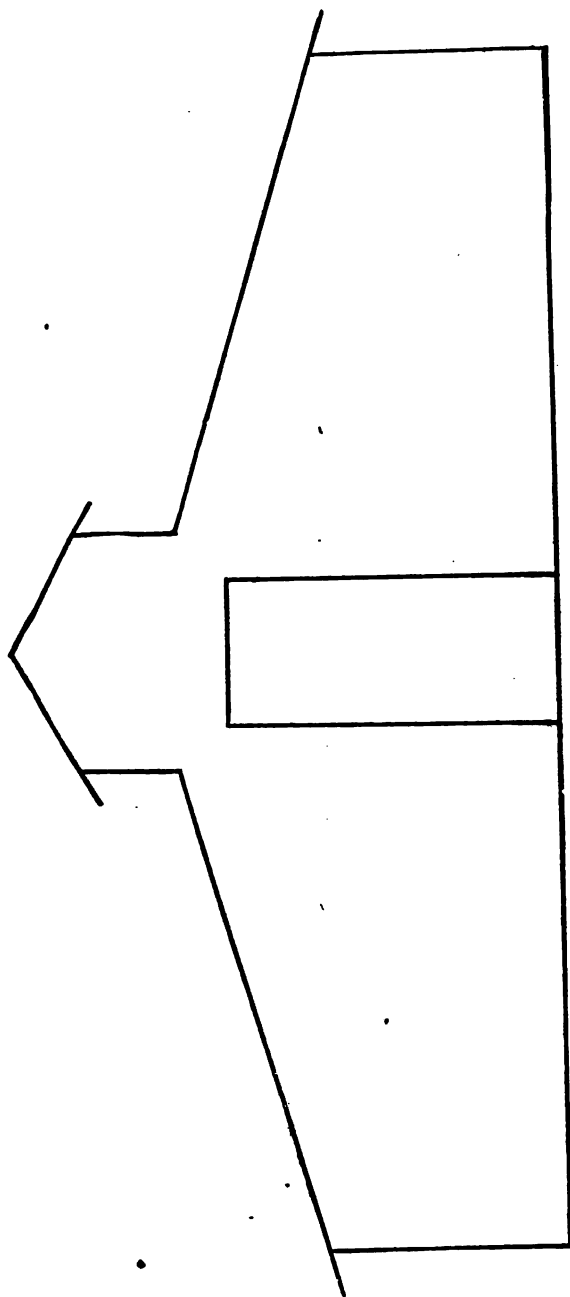


FIG. 10.—HOG HOUSE — FRONT ELEVATION.  
Scale  $\frac{1}{4}$ " to 1'.

can be pumped out as often as required and used where they will do the most good, which will be on almost any growing crop, especially those requiring much nitrogen.

The grade to the floors should begin at the trough and be carried diagonally across the floor of each pen to a corner at the back, where there is an opening into the main gutter.

The floor to the feeding alley should be drained from each side and end to the center and there connected to the drain by a bell trap.

#### PARTITIONS

The partitions should be four inches thick, of concrete, reinforced at the top with old piping or other cheap iron. They should be forty inches high. This may seem low, but experience shows it to be ample except where two boars are kept in adjoining pens — a practice which is never long continued. The low partitions give better ventilation.

#### SWINGING FRONTS

The fronts to the pens should be 4 feet high and made of 1½-inch planks, securely spiked to 2 x 4 scantling, 6 feet long, with holes 3 inches below the upper ends, swinging on half-inch bolts that pass through the roof-pillar. The bottom of this front should come below the feeding alley and just clear the rear wall of the trough. The planks should be fastened to the back of the upright scantling so that the weight will keep the door shut without fastening; the whole front to be pushed back when feeding, and raised to any desired height when cleaning pens or changing stock.

#### TROUGHS

A simple way to make the troughs is to make a depression in the floor 4 inches wide, 14 inches from and parallel with the feeding alley, which is 6 inches higher than the floor of the pen, thus forming the front of the trough. The rear wall of the trough is made by placing a 2 x 4 scantling on each side of the depression, the rear one perpendicular and the front one slanting backward to make the top of the wall 3 inches wide and the bottom 4 inches wide. This gives ample room for the feed; and, by

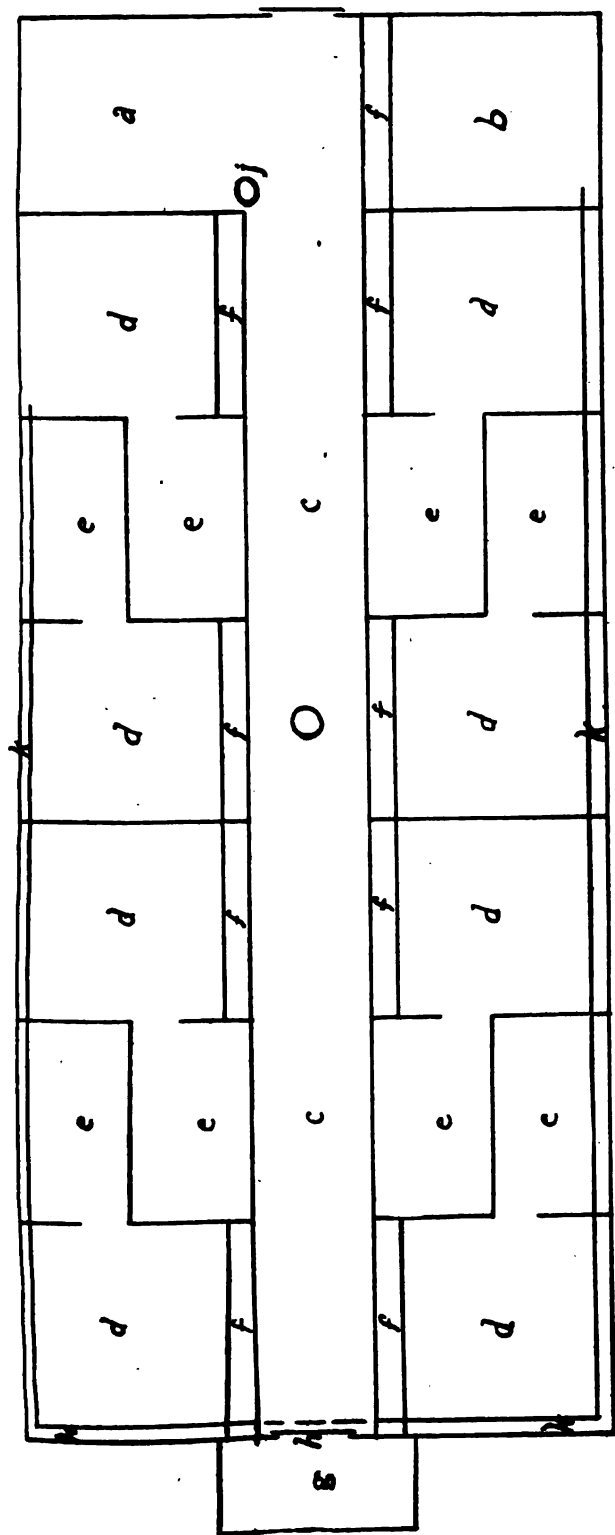


Fig. 11.—Hog House, 25 x 60.  
Floor Plan  $\frac{1}{8}$ " to 1'.

- a—Feed Room
- b—Farrowing Pen
- c—Feeding Alley.
- d—Pens
- e—Sleeping Quarters
- f—Troughs
- g—Pit for Liquids
- h—Rear Door
- i—Main Entrance
- j—Hydrant
- k—Drains





FIG. 12.—SWINGING SHUTTER TO TROUGH; OPEN ON LEFT, CLOSED ON RIGHT.

having the swing front made as above described, there is only  $8\frac{1}{2}$  inches in width of trough that the hogs can get at; thus preventing them getting into it with their feet unless they stand lengthwise of the trough.

#### CONSTRUCTION

In building the foundations care should be taken to make them of solid concrete at least a foot below the ground to prevent rats from getting under the floors, for there is no other place on the farm that they so dearly like for a breeding place, and it is a very hard one from which to dislodge them.

The old method of making wooden forms for side walls and partitions is expensive and needless, as there are metallic forms now on the market to build the hollow walls and the partitions of any thickness, which make concrete construction of all kinds of farm buildings, troughs, etc., simple and cheap and within the reach of any one.

The most satisfactory hog house that I have ever made is shown in the accompanying cuts.

## ESSENTIALS IN PROFITABLE PORK PRODUCTION

EDWARD VAN ALSTYNE, KINDERHOOK, N. Y.

Director of Farmers' Institutes

### THE FOUNDATION HERD

Not every farmer can afford to have an entire herd of pure-bred cattle or flock of sheep, since the initial investment necessary is too large for men of limited means, and with but a single animal at a birth a long time is required to establish a herd.



This is not true with swine, since a pair of pure-bred pigs or a brood sow will stock up a farm in a twelvemonth. None but the wealthy can afford to keep other than pure-bred swine. The latter, if properly selected, will be more uniform, breed truer, make more gain on

less feed in a given time, develop those parts of the body most desirable for the block, and therefore bring more per carcass and per hundredweight in a critical market than those of nondescript breeding possibly can. Hence, only the rich man can afford to suffer the loss from lack of these things. It is true that an individual lot of good crossbreds (a union of two pure-breds) will sometimes make a gain superior to pure-breds, but such is the exception that verifies the rule; and when one attempts to breed from them the results are as problematical as "the age of Ann."

Even though a man may not care to make a business of selling pure-bred stock, he will find that many of his neighbors will gladly pay him several dollars more per head for a nice pure-bred registered boar or sow than he could obtain for the same as a feeder, and the extra dollars are clear again.

### SELECTING BREEDING STOCK

The particular breed that one chooses is a matter of small importance as may readily be seen by studying the many points of

excellence of the different breeds as set forth by their advocates in this volume. Always select the one best represented in the locality, as it will be much easier to make sales where buyers can obtain large lots together, or pairs unrelated, in one shipment. I recently had a call for twenty young sows; having only seven of my own to spare I should have lost the sale had not others in my neighborhood been breeding the same kind. . Otherwise, a selection should be made from one of the popular breeds, which best suits the owner's fancy and is best adapted to his conditions and markets.

The important thing is to secure animals of individual merit from a like ancestry. Registration is simply an authentication of purity of blood, not of merit. Choose animals which are typical specimens of the breed. Remember that fat will cover many defects; therefore it is preferable to select from animals not in high flesh. A fat little pig may be very attractive, yet not make a desirable breeding animal. For this reason I prefer that pigs should have some age before I choose my breeding animals. The fact should never be lost sight of that the law of heredity applies to all characteristics — a bad, nervous disposition is quite certain to be handed down; docility and fecundity are essential qualities in both male and female and are largely inherited. The brood sow should have a strong back, be long for the breed and have at least twelve teats. The boar should be particularly well developed through the loins, stand square on his toes and be very strong on his hind legs. If either sex shows defects, select the other strong in those points, but never mate extremes.

#### FEED AND CARE OF THE SOW

While growing, the sow should have such feed as will develop her frame and digestive organs. Foods like bran, middlings and oats are high in both bone and muscle forming material. The oat hull is rather indigestible and should not be fed to young pigs. A grass or vegetable diet will do much to insure a good digestion.

A sow should not be bred until she is at least eight months old. She will then farrow at a year. (The period of gestation in a sow is 112 days.)

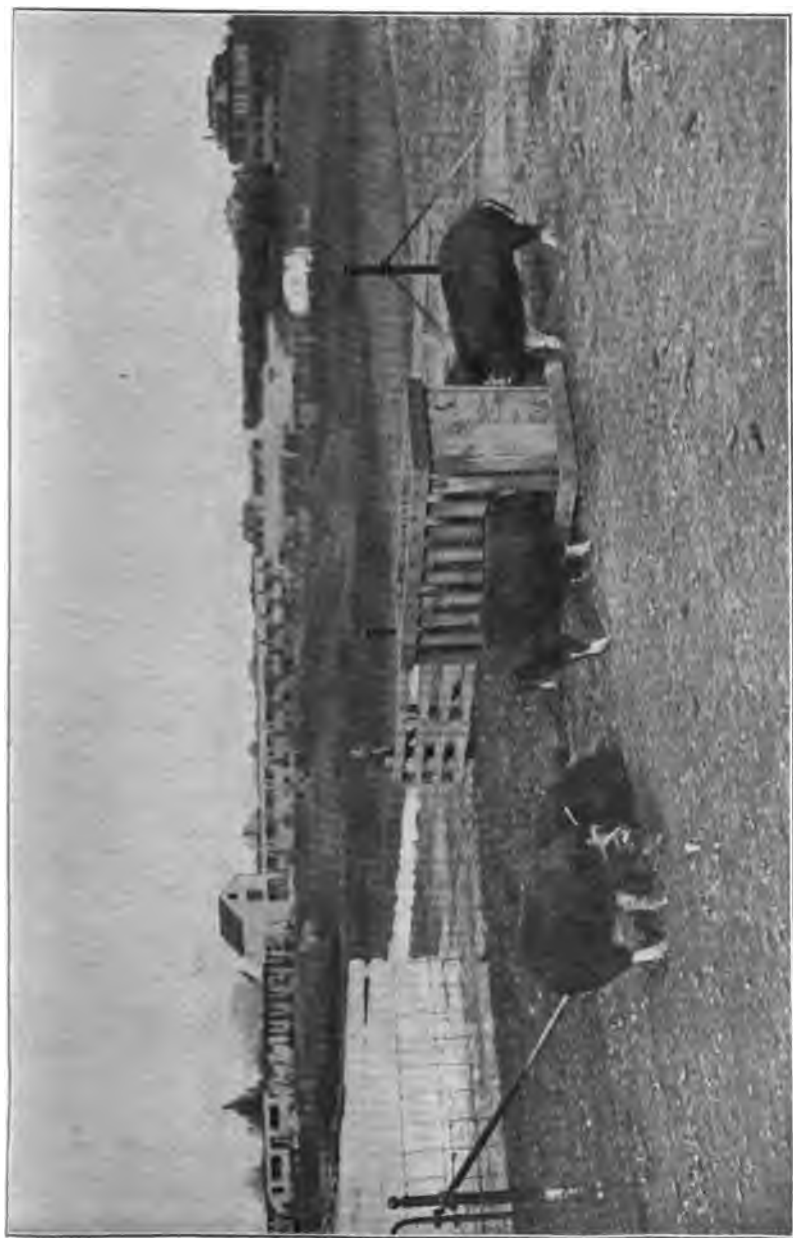


FIG. 13.—BROOD SOWS EATING ALFALFA HAY FROM RACKS, NEW JERSEY AGRICULTURAL EXPERIMENT STATION.

It is undesirable to mate two young animals. Breed mature sows with young boars, and the reverse. A mature boar can be mated with a young sow without injury to her if a breeding crate is used. This may be made like an ordinary crate open on top, closed in front and open behind, with a bar to slip behind the sow just above the hocks and a 2 x 4 strip on either side, extending from about where the sow's head will be in front to the floor in the rear, for the boar's feet to rest on. The use of such a crate is always to be recommended.

#### FEED DURING PREGNANCY

At coupling time the sow should be in a growing condition, but never fat. She should be fed lightly for a few days at that time, then more liberally on foods rich in protein and ash — such will make bone, blood and muscle. With these should be given enough fibre to fill the stomach. A portion of this would better come from vegetable or roots; clover or alfalfa hay is ideal. The heads and leaves of these from the stable may profitably be gathered and hot water poured on them, then some grain sprinkled through it. If this mixture is left to stand a few hours in a covered barrel or tub it will make a most savory food and be relished. The hay can be placed in crates or racks and the hogs will eat nearly or quite all of it. Both of these are not only high in protein but in lime as well, which is a necessary ingredient in bone making.

During the last two months before farrowing a brood sow should never be fed any heating foods such as corn; nor those which are constipating. The little pig is made up of bone, blood and muscle; the sow cannot supply them in sufficient amounts unless she receives them in her food. Should she fail to do so the pig is born weak, and easily succumbs to the least untoward condition.

All the above foods make milk. Most "bad luck" at farrowing — or any other time — is simply poor management. The sow is improperly fed, she cannot produce strong healthy pigs, she has little milk and the pigs die in consequence. She is constipated and fevered; consequently is easily irritated and injures her pigs. Her system craves protein — she eats her pigs.

## EXERCISE AND HOUSING

Exercise and dry, clean quarters are essential for any breeding animals, for none more so than the hog. A brood sow will do better, if need be, out in the snow, if she had a warm house and bed, rather than to be kept closely confined. A breeder should always avoid having several sows heavy with pig together in a pen, since they will be likely to overlie one another, particularly if the pen is cold. Such cows should be separated from others at least two weeks before farrowing, where they are unmolested and can become accustomed to their quarters. This is very important. There should be a fender around the sides of the pen in order that the sow may not overlie her pigs, especially with heavy, aged

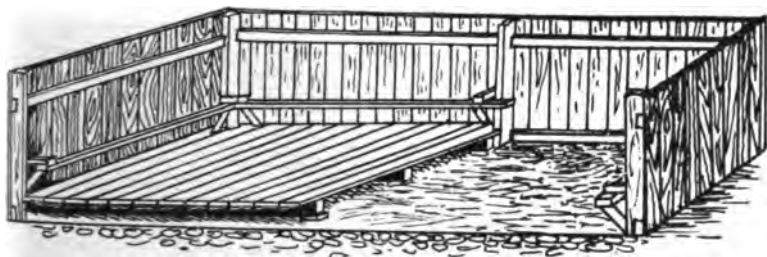


FIG. 14.—RAISED PLATFORM AND FENDERS AT SIDE OF PEN.

sows. In this connection I would emphasize that a fully matured sow which has shown herself to be a good breeder and mother, should be retained as long as possible. Her pigs will be stronger than from a young sow, although after she is three years old the litters will be smaller in number. On the other hand, when an old sow gets so heavy that she is indifferent to her pigs, the sooner she is made into pork the better.

A fender may be made with a 10 x 2 plank, about 8 inches from the floor, held in place by braces running diagonally from the outer edge of the plank to the wall.

An excess of bedding in which the little pigs may get entangled should be avoided. Short rye or wheat straw is excellent; oat straw is very objectionable.

## CARE OF SOWS AND PIGS AFTER FARROWING

If the above directions have been closely followed and the weather is not too cold little difficulty should be experienced at

time of parturition; although personal attention is always necessary. Occasionally a quiet sow properly fed will become violent at this time, due doubtless to birth pains. In such cases the pigs should be moved to a warm place; they will not suffer if not fed for an hour or two. The sow should then be given either a pint of whiskey in a couple of quarts of milk or for an ordinary sized sow 4 drams of laudanum (a dram is a tablespoonful). The former is doubtless safer for the layman and usually more easily obtained. This will produce a stupor, when the pigs can be placed with the sow where they can nurse, and when she rouses up no further trouble will be experienced.

The sow should have no feed for the first twenty-four hours. A few quarts of warm water will satisfy thirst and keep her

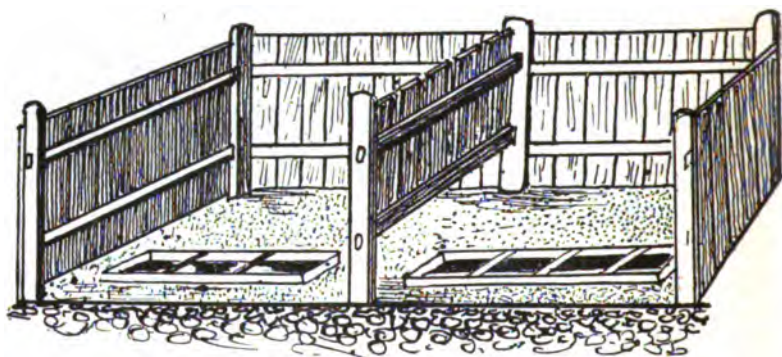


FIG. 15.—PEN WITH SLATTED PARTITION AND SHALLOW TROUGH.

quiet. To feed liberally at this time produces fever, stimulates more milk than the pigs can take, they in consequence become fevered and the whole litter dies after they should be past all danger at this stage. Increase the feed as the demands of the pigs for more nourishment increase. The little pigs should not be allowed to become too fat, or at from ten days to two weeks of age they may die from fatty degeneration of the heart. There is little danger from this in summer when the pigs are on the ground and get plenty of exercise; but much when they are confined to the pen, particularly if the litter is small and the pigs have an abundant supply of the dam's milk. Under these conditions the sow should not be too heavily fed and the pigs should

be made to exercise. A pen with a slatted partition which can be raised and the pigs easily put on the other side away from the mother a portion of the time will accomplish this. In their efforts to get back to her they are forced to move about and so do not become so fat. Inverted sods, earth from the potato or root bins to which the pigs can have access will be of material advantage.

Frequently there will be one or more pigs that do not grow, and if left alone will waste away and die. If examined they will usually be found to have one or more sharp teeth. These lacerate the nipples of the sow and the pigs' mouths, which become materated and the pigs slowly starve to death. These teeth can easily be nipped off with a small pincers, and if the surface is rough a mild file will smooth them. In a day or two the pig will begin to grow as fast as the rest.

#### WEANING

If one desires to wean early he should provide a shallow trough, to which the pigs alone can have access, in which may be placed a little sweet skim milk or wheat middlings. Eating this the pigs become used to food other than the dam's milk. Great care must be exercised that no more food is placed in the trough than the pigs will eat up quickly, and the trough should be kept scrupulously clean, otherwise it may become a source of death. Slats should be placed across it, so that the pigs cannot get in it with their feet.

If the sow is to be bred soon — which is usually desirable — the pigs can be weaned at about six weeks, otherwise there is no food so good or cheap as the mother's milk, and the sow can be no more profitably employed than in supplying it. This particularly for those who have no skim milk.

To take the pigs suddenly away from an exclusive diet of its mother's milk always results disadvantageously. Her milk is sweet, warm, obtainable at will, and will analyze 5.78 per cent. fat, 6.34 per cent. casein, 4.37 per cent. milk sugar and 1 per cent. ash — much higher in all respects than that of cows except in milk sugar. Contrast with this cold — often sour — skim milk, containing no fat, fed to them in quantity three times a day. The

old practice of leaving a pig or two with the sow is always to be condemned and often results in the loss of one of her teats. She should be removed from the pigs—never them from her—to a strange place. The change and a scanty diet will soon cause her milk flow to cease. She will usually come in heat about the fifth day after the pigs are removed.

If one wishes a second litter in the shortest time, a sow will often conceive the third or ninth day after farrowing if the boar is placed with her. In such cases the pigs should be weaned as soon as possible, and the sow given abundant building material in her food for herself and expected litter.

#### FEEDING OF PIGS AFTER WEANING

If the pigs are to be pushed for the block, any wanted for breeders should be separated and given a diet which will develop their frame and constitution rather than to produce fat.

The fact that a hog is a graminivorous animal should never be lost sight of. Only under exceptional circumstances can a profit be made from pigs confined in close quarters and fed on an exclusive grain diet. Readers should note carefully what is advised by Professor Minckler and Mr. Harpending in this volume. In addition I would emphasize the value of some by-products, among which are cull or windfall apples. I have frequently heard the statement that sour apples were not good for hogs. I have made hundreds of pounds of pork from such apples as a major part of the hog's diet. Often they will be worth more so fed than in any other way, particularly if the pigs do their own harvesting. Further, a codling moth or apple maggot passing through the interior of a hog will never have any descendants to trouble the orchardist. Small potatoes are another valuable by-product. These should always be cooked, since the raw starch in them is very indigestible. Cull beans are a cheap food rich in protein and are particularly good for stock hogs. They are not very palatable, but after being cooked with molasses in the proportion of a gallon of molasses to a bushel of beans they are relished, and the combination is an excellent one.

Squashes and pumpkins, although not strictly by-products, may

almost be classed as such, when grown, as by the writer, in the tree rows of a young orchard. The squashes should be of a soft-skinned variety. Neither need be cooked nor the seeds removed; the latter are a valuable vermifuge or worm destroyer.

Excess ears from the silage corn can find no better market than the fattening pig. I should never husk corn for pigs. They can do it much more cheaply than can the human animal, and being compelled to strip off the husk they must eat the corn more slowly, hence better chew and digest it. The husk also prevents the corn from becoming hard. Pigs fed such things in combination with a moderate amount of grain will make pork very cheaply, and not be troubled with indigestion.

#### QUARTERS AND HEALTH

Lumber or other building material is cheaper for the production of pork than expensive concentrated feeds. Therefore the pen should be warm in cold weather, so the pigs will not have to supply this heat from fuel in the shape of food, nor lie upon one another to keep warm. When they come from such a nest on a cold morning their bodies will steam when the cold air strikes them, and rheumatism and kindred troubles will follow.

A pig is naturally clean if given an opportunity. A raised platform at one side of the pen for sleeping quarters will aid materially in keeping them clean and dry. Cement floors are condemned and commended; the writer can do both consistently. Constructed with nothing but earth underneath, cement floors are too cold for anything except fattening swine, and unless a gutter is provided to take off the urine they soon become very dirty. If, on the other hand, a layer of heavy tar paper is placed between the lower and upper layer of concrete they will be warmer than any board floor. The gutter should run to a tight vat which can be filled with absorbents, or from which the liquid can be pumped in a vessel; this will do away with the last objection and the excrement will make an increase of manyfold from the land on which it is applied. Heavy feeding on concentrates alone will often cause indigestion or stomach staggers. To prevent this, free access to the following mixture in addition to the vegetable diet suggested, will promote digestion and health: one-half bushel of broken

charcoal, 1 peck of wood ashes, 4 quarts of salt, 2 pounds of sulphur. To this may be added a pound of black antimony.

#### ECONOMY OF EARLY MARKETING

The profit in feeding an animal is always that obtained above the maintenance ration. About three pounds of dry matter is required to support each 100 pounds of live weight per day; all food in excess of that should go for gain. If the animal weighs 200 pounds, six pounds daily will be needed for sustenance. An experience of the writer will help to make this important point clear.

Some years ago I was feeding ten shoats which dressed 130 pounds each. They were gaining a pound each daily, or ten pounds for the lot. I put sixteen in their place weighing 80 pounds each live weight. They gained a pound each per day, or sixteen pounds for the lot, on a little less food than the ten ate. See also in article on "Swine on State Farms," page 171.

#### THE BOAR

What is true of breeding young sows is equally true of the boar. One of the laws of life is: if there is to be the maximum of strength and vigor in the progeny there must be maturity in the ancestors. A boar should not be used until he is at least eight months old, then only in moderation and preferably with old sows. This will not be difficult if the sows are made to stand in a depression. The breeding crate referred to will make this easy; but a few minutes with a shovel will do the trick. I would emphasize only one service, both for the good of the boar and the size of the litter.

The practice of indiscriminate service is always to be condemned. If the boar is to have many sows he should be especially fed. Oats, linseed meal and roots are ideal articles of diet. It will be worth while when he is young and his teeth are not too hard, to nip or saw off his tusks, without which he will be as well off, and very much safer to handle.

In buying a boar or any animal from outside, it is advisable to place such in separate quarters for three weeks before they come in contact with other animals. Had the writer followed this practice he would not have lost over sixty animals from hog cholera introduced by a stock boar.

## CASTRATION

In the case of young pigs the sooner this is done after the testicles are in the sack the better. There is nothing in the moon's phase or the signs of the Zodiac as to a favorable or unfavorable time for this operation. Any time is good except when flies are abundant or the weather is very cold, hot or wet. The important thing is to have hands and knife clean and the animal quiet, with little food in the stomach and the parts thoroughly washed with a disinfectant before and after the operation; then the animal kept in a dry, clean place and lightly fed for a few days after. Any man who keeps hogs can easily perform this simple operation, and it should not be necessary to call in an "expert" who too often is more superstitious than clean. With the young pig let the attendant, protected by a clean sack, hold it on his knee with the head against his breast, with a fore and hind leg in either hand, which will throw the testicles toward the surface. Then let the operator wash off the hind part with a disinfecting solution of carbolic acid and water or one of the sheep dips which every stockman needs to have on hand, the hands having been well washed and dipped in the solution. Dip the knife in the same. Needless to say it should be sharp. Cut lengthwise through the scrotum, penetrating the fleece or inside lining. As the testicle comes to the surface follow the cord to the lowest point possible, then sever it. Care should be exercised to make the cut low down on the animal to allow the secretions to escape. Pour some of the disinfectant in the wound and the work is done. It will be a wise precaution to watch the animal for a day or two and note whether there is undue swelling and that the puss is escaping freely; also that there are no fly blows. With the mature boar follow the same proceeding. He will be more difficult to handle, but this can be easily overcome by using a quarter-inch rope six or eight feet long, with a slip knot in the end which can readily be untied. Drop the noose over his upper jaws behind the tusks. Draw tightly and wind the other end of the rope around a convenient post. The perversity of the animal will cause him to pull back on the rope with all his might, when he can be easily handled with no danger from his jaws. (The same method will serve when ringing a hog.) I have operated

on a boar in this position with a man on either side to keep him steady, without throwing him. Ordinarily it is better to do this and bring his four feet together with a strap or rope. Such animals would usually be better castrated in the spring as soon as the service is over, when they will have the summer in which to grow and be more free from objectionable odors.

#### COMBATING VERMIN

Sometimes there may be an infestation of vermin, although in well regulated swine husbandry this should occur only when it is brought in from outside. In any event, when vermin are present, it is not a theory which confronts the swine keeper and the condition must be met. The premises should be disinfected as described on page 144 of Dr. Volgenau's article on "Sanitation." Ordinarily spraying or washing the animal will be all that is necessary, particular attention being given to the parts about the ears, behind the legs and in the folds of the skin. In severe cases dipping the entire animal will be necessary. A dip may be made as follows: 4 gallons of crude petroleum, 1 gallon of hot water, 1 pound of hard soap. Cut up the soap and dissolve in the water. Mix with the petroleum and thoroughly agitate. A spray pump is excellent for this purpose. Add sufficient water to make twenty gallons.

Or, a stock emulsion may be made as follows: 2 gallons of kerosene, 1 gallon of water,  $\frac{1}{2}$  pound of hard soap. Boil the water and hard soap until the latter is dissolved. Remove from the fire and add the kerosene, agitating until an emulsion is formed. Dilute with warm water to make twenty gallons. In severe cases where a strong solution is desired only ten gallons need be made from above. This will not injure the animal but usually the weaker the will suffice.

#### SUMMARY

None of the above recommendations require any great outlay of time or money. They are the little things, observance or neglect, which make for success or failure. Someone has well said, "Little things are little things but faithfulness in little things is great." This will apply to life in general as well as in this case of the swine business.

## FORAGE CROPS FOR SUPPLEMENTARY FEEDING

H. B. HARPENDING, DUNDEE, N. Y.

Breeder of Berkshire Swine

The use of forage crops for supplementary feeding in the growth of swine is beyond the experimental stage. Results of varied experiments at different state colleges together with the experience of practical swine breeders and farmers bear this out.

A crop rotation may be carried out in small lots devoted to swine pasture whereby such lots will furnish a large portion of the feed for the young and growing animals and the sole ration for mature animals during many months of the year; and, by



FIG. 16.—HOGGING DOWN RYE AND VETCH.

means of such cropping, the pork production per acre will not only pay excellent profit for the labor and the use of the land but the fields so used will gain in fertility from year to year to a surprising extent.

Each individual is governed of course by the number of hogs to be maintained or fattened and also by the land at his disposal suitable for the purpose. For best results, lots devoted to forage crops should range from an acre to three acres in extent.

The following crops will be found satisfactory and profitable for the purpose under New York State conditions: alfalfa, red clover, rape, rye, rye and winter vetch, corn, corn and soy beans, sorghum. Permanent blue grass pastures are always in order and furnish considerable feed during the growing season except in midsummer. A permanent stand of alfalfa will not endure heavy pasturing by swine and when used to any extent for this purpose it must occupy its place in regular rotation. It should be pastured only to about one half its capacity and regularly cut and harvested when the new growth appears at the crown the same as if it were not being grazed. A good stand of alfalfa will produce about 500 to 600 pounds of pork per acre during the season. Red clover produces about one half to two thirds as much.

Dwarf Essex rape has come into general use with pork producers and makes an excellent pasture. It may be sown in the corn at the last cultivation ahead of the cultivator, about three pounds to the acre, and will furnish considerable feed after the corn is removed, lasting well into November. It is damaged but slightly by heavy frost but should not be pastured when in a frozen condition. When sown alone for pasture, it may be drilled or broadcasted about three to four pounds to the acre any time after the ground is fit in the spring up to July 1st, an early seeding being advisable. It is essential that rape be permitted to make new growth from time to time and on that account it will be found advisable to have two separate enclosures for this crop or to remove the swine to other pastures while it is making new growth. Should it get the start of the pigs, furnishing more feed than they can consume at the time, it should be pastured down with sheep or cattle or clipped with a mower. When so treated, it makes most luxuriant growth and will produce from 400 to 500 pounds of pork per acre during the season.

Rye may be sown alone for winter pasture or in combination with winter vetch, the latter being advisable—one and a half bushels of rye to one half bushel of vetch drilled or broadcasted from August 10 to 20. It is suggested that the vetch be inoculated with cultures or soil. Sufficient may be secured from the College of Agriculture for twenty-five cents to inoculate an acre of vetch; full directions for its use will accompany same.



FIG. 17.—SUMMER PASTURE IN RAPE.

This will be ready to pasture in October and may be used throughout the winter and spring. It is injured but slightly by trampling but the pigs should be thoroughly rung to prevent rooting. If the crop is to be harvested, the pigs should be removed from the pasture when the rye commences to joint; after the crop is matured it may be hogged down or harvested and threshed. This turned under in the spring, will be found an excellent crop to precede corn, since humus is added to the soil and the pigs after pasturing the field throughout the winter have supplied considerable manure. Should it make rank growth in the spring before there is an opportunity to plow it, cattle or sheep will trim it down to excellent advantage.

The practice of sowing rye and vetch in the above proportions in corn at the last cultivation, to be covered by the cultivator, is strongly recommended and a trial will induce its continuance. As soon as the corn has been cut and removed from the field, or shortly thereafter, the hogs may be turned in upon the rye and vetch and remain thereon during the winter. The growth will serve the double purpose of pasture and cover crop. Any corn field may be utilized for this purpose if well fenced. The accompanying photograph shows a field of rye and vetch which follows corn having been sown in the corn at the last cultivation and which produced on ordinary land thirty-seven bushels to the acre.

If the rye or rye and vetch is left to mature, it is advisable that the lot be seeded with clover and alfalfa, half and half, about eight or ten quarts per acre, at the usual time for seeding clover in the spring. This may be pastured the following season and later turned under for corn. Land thus utilized will increase rapidly in fertility, furnish considerable pasture for swine and at the same time produce the usual crop of corn and grain.

The practice of hogging down corn, so common among western feeders, has never appealed to the eastern farmer, perhaps because of the consequent loss of the stalks which are regarded as of no small value to us. Aside from this the practice is not so wasteful as it would seem at first consideration. If a careful record is kept of the pounds of pork produced on an acre of corn or of rye harvested by the hogs, it will be found that it has paid better than if harvested and marketed in the usual way with much less

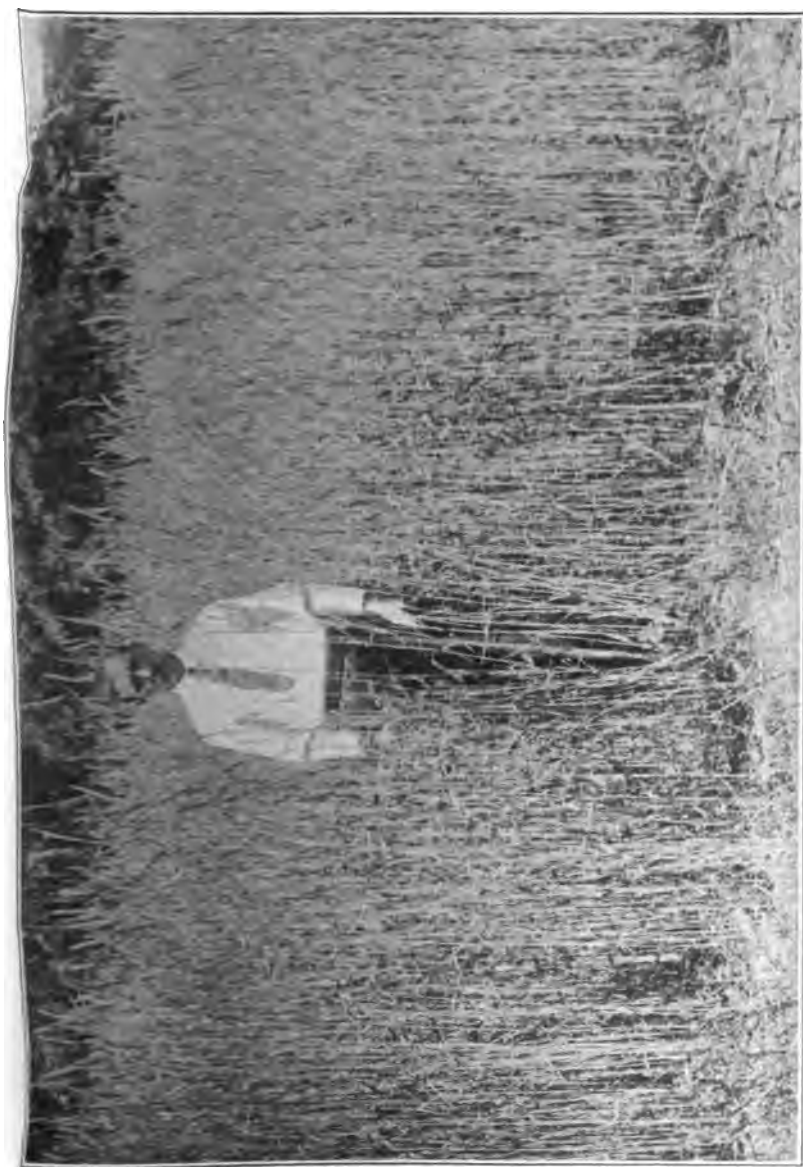


FIG. 18.— RYE AND VETCH FOLLOWING CORN. YIELD OF 37 BUSHELS PER ACRE. FARM OF H. B. HARPENDING, DUNDEE, N. Y.

labor expense, and the resultant manure is already scattered about the field.

To those feeders who do practice hogging down corn, or contemplate the same, the suggestion is made that soy beans be planted with the corn and that a cover crop of rye and vetch be sown as before advised. By the time the corn is mature, the beans will be ready for the hogs and an already balanced ration is supplied. The hogs will eat the beans, pods and plants almost as greedily as they will the corn. Besides, the field will rapidly gain in fertility.



FIG. 19.— RYE AND VETCH PASTURE IN LATE FALL.

Unless the source is on your own farm, avoid the running stream as you would a pestilence.

Any of the forage crops above mentioned will maintain mature animals without additional feed. The youngsters and the animals being fattened will require a supplemental ration and access to drinking water.

Good fences are necessary where the hogs are maintained on range. The woven-wire fence with a substantial knot that will not slip is required. There are several good makes on the market. The top and bottom wires should be not less than No. 9. Upright stays a foot apart are sufficient and much cheaper than the regu-

larly advertised hog fence with stays six inches apart. Twenty-six or twenty-eight inches is sufficiently high for most breeds of swine. Unless the hogs are kept well rung, it will be necessary to run a strip of barbed wire along the bottom of the fence. As with all other wire fencing, the end posts should be substantial and well set and the fence should be well stretched and tacked upon the posts as close to the ground as possible.

## THE VALUE OF FORAGE CROPS IN PORK PRODUCTION

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The farmer interested in pork production who fails to recognize the importance of growing the animals during their early stages of development on home-grown feeds, is not the farmer who makes the most money from his endeavors. The utilization of forage crops is just as essential in pork production as the silo or soiling crops are necessary for success in dairying. The time has long since passed when the farmer could afford to buy grain products exclusively for feeding his pigs, and expect to realize a reasonable profit.

There is still another reason for the use of forage crops, and this relates to the health, vigor and vitality of the animals. Pen-fed pigs positively do not grow as rapidly nor as economically as do animals that are given free range and are permitted to graze at leisure on the palatable crops that any farmer can grow on his farm. For sanitary reasons forage crops pay, while the distribution of the voidings over areas given over to pork production is a means of conserving and adding to the fertility of the land that recommends itself to the progressive farmer.

It is a common complaint among farmers at the present time that it is difficult to obtain competent farm labor. This is one of the drawbacks to the dairy industry, and it would seem reasonable to believe that pork production supplies a means of solving such difficulty in part at least. The labor involved in caring for swine is comparatively small providing forage crops are grown and the animals are permitted, for the most part, to harvest such crops. It is unnecessary at this time to go into details as to the possibility of profits with pork, in order to convince those interested in this line of animal production as to the advantages of



FIG. 20.—FEEDING IN GROWING RYE.

this phase of live stock farming. Summarized, the following facts are significant:

1. The initial investment is small as compared with other lines of live stock farming.

2. It is easy to "get in" or "get out" of the swine business.

3. Requires small expenditure for labor and is less exacting and confining than dairying or garden farming.

4. Enables utilization of farm, kitchen, orchard, garden, seed, mill and other waste products, without subjecting them to expensive methods of preparation.

5. Breeding animals are prolific (deliver large litters), thus enabling rapid and steady improvement by selection and systematic mating.

6. The animals mature at an early age; require short growing and fattening periods; can be readily marketed at any age or weight.

7. Necessary colony houses, fences and equipment can be provided at small cost without need of expensive labor.

8. Manure voided is worth \$3.50 per ton. Rooting improves clay soils and soddy orchards; while pigs scavenger and work over coarse barnyard manure and improve its texture and content.

9. There exists steady demands for meat or lard products; meats may be cured or placed in cold storage; the product is not perishable as is milk, vegetables, etc.

10. Establishes a market for home-grown feeds; thus gives the farmer the grower and feeder's profit.

11. It is much easier and far more economical to market a ton of pork than five tons of corn, its equivalent. The voidings add to the profit by maintaining soil fertility.

12. Swine in the barnyard make dairying or beef production more profitable, and the industry serves as either a side line or may engage extensive development.

Of course, there are certain limiting factors in reference to pork production that should be considered, and they may be stated as follows:

1. Losses sustained from cholera, parasites and pests.

2. The attention given sows at farrowing time is important, as the raising of large litters and keeping the youngsters growing steadily from birth to maturity are essential for success and profit.

3. Unless free range, green forage and home-grown products, rather than purchased feeds, are utilized, gains will be expensive and of questionable profit.

4. Losses will be entailed unless cool, shady retreats are at hand during the summer season, and dry, protected quarters furnished during the winter months.

5. Type and breeding of animals selected: common grades or scrubs develop slowly; require long fattening periods; the net gains are expensive; and their carcasses do not evidence extensive fleshing in regions of valuable cuts, back, loin, hams and ribs, when comparison is made with pure breeds or selected grades.

If reasonable care and judgment is exercised in the management of the herd, and modern practices in reference to sanitation employed, there is little danger of loss from disease or other causes. The factors that limit profits are: prolificacy, weight for age, quality, type, vigor and the use of young animals.

It will be noted from the above that the statement is made that profits depend upon the use of farm products as a source of food, and that rapid as well as economical gains are only possible with animals that are healthy and vigorous and that conform strictly to the utility type as fixed by the butcher or packer.

There are a few crops that are peculiarly adapted for swine, and these can be grown successfully on the average farm. In order of their value they could be listed as follows:

- Alfalfa
- Dwarf Essex rape
- Red clover
- Soy beans
- Sweet clover
- Oats and Canada field peas
- Rye and wheat
- Blue grass pasture

In many instances a combination of a number of these crops is a distinct advantage, and such a plan makes it possible to supply green forage from early in the spring until relatively late in the fall.

#### ALFALFA

The use of alfalfa as a forage crop for swine has practically revolutionized the swine industry, notably in the West and considerable in the East. It is valuable not only as a forage crop, but may be used to a distinct advantage in the form of hay, or cut up and fed as a chop feed, as it supplies not only protein in abundance, but sufficient bulk to enable brood sows to be satisfied with their daily ration, and at the same time does not permit them to put on excessive flesh even though the alfalfa is supplemented, as it should be, with ear corn. Naturally, it is too bulky for fattening animals in its dry form, but if used extensively as a forage crop the following suggestions might be carefully considered:

1. Alfalfa can safely be pastured with a limited number of swine, providing the animals are not allowed to crop the plants closely.

2. At least two cuttings for hay should be made during the season; the appearance of the crown shoots and blossoms suggesting the appropriate time.

3. The animals should be turned in at the outset, when the plants are from seven to nine inches high, and never allowed to make the field look like a regular pastured area.

4. Four brood sows with average litters may be allowed per acre at the outset, providing they are liberally fed a grain mixture and the number reduced as unfavorable conditions appear.



FIG. 21.—ALFALFA PLEASING THE PIGS.

5. The period from May 1st to October 1st suggests the safe limits of the pasturing season; however, with due regard to season conditions, fall sows with litters may be turned in for part days up to November 1st. The crop winters stronger if the plants are left about seven inches high.

6. If shoats intended for fattening gilts for breeding purposes are utilized, a safe guide is suggested of one ton of live weight per acre. With ear corn and tankage, supplementing the forage, gains and growth will be most economical.

7. Based upon value of pork produced, the labor saved, the amount of fertility added and distributed, and the health and type of the alfalfa pastured pig, this practice supplies the means of obtaining by far the greatest income from an acre of this famous forage and hay crop.

## DWARF ESSEX RAPE

In sections where alfalfa winter kills, and providing it is desired to seed a crop that can be utilized the first year, there is nothing that compares with Dwarf Essex rape. It can be seeded any time from the first of March to the first of August, and providing reasonable judgment is used in pasturing the crop, it will supply green forage well into October. From six to eight pounds



FIG. 22.—RAPE, SOY BEANS AND SWEET CLOVER, NEW JERSEY AGRICULTURAL EXPERIMENT STATION.

of seed per acre is all that is required, and the cost is but six cents per pound. By all odds it is the cheapest crop to seed, and is adapted to practically all conditions. The animals should not be turned in, however, until the plants are ten or eleven inches high, and at no time should they be permitted to crop the plants down too closely, unless it is late in October when it is desired to clean up the field. Dwarf Essex rape and soy beans with sweet clover make one of the best combinations, and the following mix-

ture per acre has been used to advantage at the New Jersey Experiment Station:

Soy beans .....	1 bushel
Dwarf Essex rape .....	6 pounds
Sweet clover .....	10 pounds

The rape and sweet clover are mixed together, and distributed by means of a press drill, while the soy beans are put in by means of an ordinary grain drill run in the opposite direction from which the rape and soy beans were drilled. This insures an even distribution of the seed, hence a good stand.

#### RED CLOVER

An abundance of lime practically insures a satisfactory crop of red clover. Fall seedings do the best in the New Jersey sections, and the red clover can be safely pastured the first year. Often times it will not last more than two years, but as a source of protein it compares quite favorably with alfalfa, and there is nothing more palatable than the juicy leaves of this legume. It certainly should have a place in the rotation on every pig farm. Pigs in clover soon make hogs for the butcher, providing ear corn supplements such forage.

#### SOY BEANS

In the southern states the soy bean is rapidly gaining a foothold in their crop rotations and it is gradually pushing its way northward. It is an expensive and troublesome crop to harvest for seed, but this difficulty vanishes where pigs are utilized as bean harvesters. In combination with rape it makes a most excellent forage crop, and with favorable season conditions it is doubtful if any crop combination that might be suggested would excell in usefulness these companion crops. The pigs will naturally eat the soy beans first, but careful observation goes to show that the porkers always top off their meals with a few rape leaves. The sweet clover may be omitted and the mixture recommended is as follows:

Soy beans (Ito San variety) .....	1 bushel
Dwarf Essex rape .....	8 pounds

The animals may be turned in when the rape plants are ten or eleven inches high, or if it is desired to fatten the animals it would

be well to delay foraging until the beans are all in pod. If ear corn is used as a supplement for fattening animals, foraging in a field where this mixture is utilized, will not only increase the gains rapidly but economically, and the profits will astonish the conservative farmer.

#### OATS AND CANADA FIELD PEAS

Oats and Canada field peas may be seeded early in the spring, and can be pastured safely about thirty-five days after planting,



FIG. 23.—COLONY HOUSES GROUPED READY FOR CORN FODDER OR OTHER SUITABLE PROTECTING MATERIAL.

providing season conditions are favorable. It would be well, however, to add six pounds of rape per acre to a mixture of a bushel of oats and a bushel of Canada field peas per acre, for after the oats and peas are gone, the rape plants would take renewed vigor, and if the animals were turned off for a week or ten days the rape would furnish green forage throughout the balance of the season. What is termed a "shot gun" combination is as follows:

Oats .....	30 pounds
Canada field peas.....	50 pounds
Dwarf Essex rape.....	5 pounds
Sweet clover.....	8 pounds
Red clover.....	5 pounds

## RYE AND WHEAT

There is nothing more useful for brood sows in the early spring than is the practice of permitting them to forage at leisure in green rye or wheat fields. This winter grain can be seeded in the fall after the forage crops have been killed by frost, and in case barnyard manure is spread on the green rye or wheat during the winter months, it will take root early in the spring and supply an abundance of green forage. There is some question about the actual amount of nutrients that pigs are able to find in green rye or wheat, but there is no question about its usefulness as a succulent feed. It can be plowed under as a green manure crop if it grows past the foraging capacity of the pigs, and any one of the forage crops before mentioned may be seeded to advantage.

## BLUE GRASS

Blue grass serves as a permanent pasture, and if one is engaged extensively in pork production it is an advantage to have one or more fields where one may turn the animals in at any time without injury to the sod, for the purpose of protecting the forage crop that may be cropped down too closely. A surprising amount of feed may be obtained from a few acres of blue grass pasture, and in case bedding is needed, the fields can be clipped and the material used as such.

There is still another use that may be made of Dwarf Essex rape and soy beans that is deserving of extensive adoption. Where it is intended to hog down corn, a mixture of one-half bushel of soy beans and six pounds of rape may be seeded to advantage in the corn just previous to the last cultivation. If a small amount of rye — say one bushel per acre — is added to this mixture, it is possible under certain season conditions to establish at this time a satisfactory winter crop. If the animals are turned into the corn as the ears are well glazed, and providing the rape and soy beans have gained considerable foot-hold, the animals will have a balanced ration that will enable them to grow rapidly and put on gains economically without the addition of any feed or care whatsoever.

A mineral mixture of equal parts of wood ashes, charcoal, salt and air slaked lime should be kept before the pigs at all times, and as is the case with pasturing all forage, water should be available in abundance.

There is still another phase of the pork production problem that might be appropriately discussed here. It relates to the use of serum and virus as a preventative against hog cholera. Records show that where protective serum or even virus has been used, the losses are much less where the animals are permitted to run at large on pastured areas or on forage crops than is the case where



FIG. 24.—BLUE GRASS PERMANENT PASTURE.

pen-fed animals are treated. The animals are more resistant to the disease if they are healthy and active.

Aside from the question of economy in feeding, the outstanding advantage of the use of forage crops for swine is the fact that the animals thus cared for are more resistant to disease, since it is possible to keep them under more sanitary conditions. The distribution of the voidings over the pastured areas is a distinct means of conserving the fertility, and adding to the value of the producing capacity of a given area. One must make sure, in any event, that external as well as internal parasites are not sapping the vitality of one's charges. Crude oil for the outside, and

ferrous sulphate for the inside will serve as a means for eradicating such pests. Saturate a piece of waste with crude oil and go over the pig's body as often as a single pest is found. Give in the feed for three days in succession, one dram of powdered ferrous sulphate for every 100 pounds of live weight of the animal and follow with a laxative feed and the internal parasites will disappear.

Healthy animals of utility type will harvest forage crops and convert corn into pork products that will enable the small farmer to intensify his farming operations.

## SOME GRAIN RATIONS FOR SWINE

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The following named feeds are standard when it comes to feeding hogs: corn, barley, alfalfa hay, digester tankage, red dog flour, wheat bran and oil meal. This does not include waste products, but suggests feeds that may be used as a basis for successful feeding. The following rations are useful:

### FOR BROOD SOWS BEFORE AND AFTER FARROWING

Ear corn .....	100 pounds
Digester tankage .....	12 pounds
Wheat bran .....	10 pounds
Oil meal .....	4 pounds
Bone meal .....	2 pounds

This should be fed in such quantities as would maintain a vigorous, active appearance. A safe rule is to permit the brood sow to gain one-half pound daily from the time she is bred until farrowing time, gradually increasing the feed after farrowing, as the pigs demand more milk, until the brood sow is on full feed — all she will eat with relish.

### FOR YOUNG PIGS BEFORE WEANING

Red Dog flour .....	100 pounds
Crushed seed oats .....	100 pounds
Digester tankage .....	10 pounds

Feed in such quantities as the pigs will clean up readily at three feeding periods. This may be supplemented with a small amount of soaked shelled corn.

### FOR PIGS WEANED UNTIL WEIGHING 50 POUNDS

Soaked shelled corn or ear corn .....	100 pounds
Red Dog flour .....	50 pounds
Wheat bran .....	15 pounds
Digester tankage .....	10 pounds
Skim milk, 4 pounds of milk for each 1 pound of grain fed.	

## FOR MARKET PIGS

First period, 3 to 6 months of age:

Corn meal .....	100 pounds
Red Dog flour .....	25 pounds
Digester tankage .....	10 pounds

Second period, 6 months to 1 year:

Ear corn .....	100 pounds
Digester tankage .....	5 pounds

This mixture should be fed to the animals intended for fattening purposes in such quantities as they will eat and clean up with relish. There is no advantage in grinding corn for swine. The tankage or red dog flour can be mixed with water or skimmed milk, and fed as a thin slop. The use of alfalfa, rape or clover pasture will materially cheapen gains during early growing and fattening periods. Soaked shelled corn and 5 per cent. of tankage added makes a fine feed for sucking pigs when fed in small quantities.



## FEEDING HOTEL KITCHEN REFUSE TO SWINE

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Farmers' Institute Lecturer



The practice of feeding kitchen refuse to swine in an effort to profitably utilize one of our most common waste products is a matter of growing interest throughout the country, especially in the eastern half of the United States where the cost of raising and buying grain products suitable for swine feeding is comparatively high. It has always been done both successfully and profitably on a small scale by the individual farmer feeding the waste materials from his own kitchen to a few hogs, but when tried out on a larger scale the results have been generally unsatisfactory, the trouble in nearly all cases being that after a certain period of such feeding, some disease would develop in the herd and wipe out most, if not all of the profits.

### PERSONAL EXPERIENCE

After an experience covering a period of six years in successfully feeding the kitchen refuse from a large city hotel to a large herd of hogs, averaging fifty mature brood sows, I believe that the trouble experienced by the various feeders has arisen almost invariably from carelessness in the condition of the material fed or in the manner of feeding it.

I do not think it is possible to feed to hogs the refuse garbage as gathered from house to house in the city once or twice a week, as is customary, without having constant trouble; nor to collect it every day and then feed it by throwing it out on the ground in the hog lot as is also customary. In either case there is always the chance for the food to become fly blown or partially decayed and unfit for food before it is eaten, and although the hog is

seemingly a glutton willing to eat almost everything, it is not able to withstand much food that is unfit. This is so important that even when the kitchen refuse is obtained from a large hotel or restaurant or from the kitchen of an asylum, hospital or other large institution, the matter of keeping out the undesirable and even harmful things is a question of almost eternal vigilance on the part of someone. In my own case I arrange with the steward of the hotel to see that certain things are kept in separate cans, in return for which my driver is careful to return to the steward each week all of the silver butter patties, small syrup cups, knives, forks and spoons that are found in the cans, and of which the actual value is sometimes as much as two hundred dollars per year.

#### FEEDING VALUE

The most valuable part of the refuse from the hog feeder's standpoint is the soup stock (solid meat from which soup has been made), table scraps and waste bread.

#### METHOD OF HANDLING

The refuse is removed every day in the year except Sundays, and is drawn in covered metal cans holding one-half barrel each. I furnish the cans, of which it requires seventy-five, since we draw twenty-five on each load and sometimes during conventions two loads a day. The other cans are placed in convenient corners of the kitchen and meat room and as soon as filled are taken down to the storeroom — a refrigerator room with coils of pipe entering it from the ice plant.

The harmful things that have to be kept out, or at least kept separate, are boxes containing soap powders and potash (often used in cleaning copper sinks and kettles), and fish and chicken entrail, any of which will kill hogs if much is eaten. Some things, while not so harmful, are distasteful to pigs and are kept separate, such as coffee grounds, sawdust, grape fruit and orange skins. Other waste not worth hauling but frequently making up part of the load, are sweet corn husks, melon rinds, celery tops and potato parings.

## METHODS OF FEEDING

Upon arrival at the farm the cans are emptied into large metal tanks beside the feeding floors; these are kept tightly covered in warm weather to keep out all flies.

After being emptied, the cans are washed in a tank of hot water to which has been added a one-pound can of potash, and are ready to be returned the next morning.

The brood sows are fed twice each day on feeding platforms, made either of concrete or matched plank, and have access to alfalfa pasture in the summer and alfalfa hay in winter, with a constant water supply both winter and summer.

## IMPORTANT ITEMS

The things I consider to be of most importance are: frequent regular collections in covered receptacles that are thoroughly cleansed daily; careful watching to keep out harmful and distasteful materials; feeding on tight floors of either matched plank or concrete that can be kept clean; feeding in conjunction with legume pasture in summer and legume hay in winter; access to a constant water supply. Where the material is gathered indiscriminately from different sources, not subject to regulations that I have cited in my own case, it is imperative that the material should be thoroughly boiled before using.

## ADVANTAGES

The actual cost of hauling is offset to a considerable extent by the convenience of having a team going to town each morning with a light load of empty cans. Crates of live stock may be taken to the express office for shipment, crates of eggs may be carried daily or semi-weekly for special hotel or store trade, the mail may be sent and received daily, and fresh meat and grocery supplies obtained, thus saving practically all the time usually required for driving four miles to town for supplies and special errands.

Kitchen refuse will entirely take the place of grain food for brood sows and at much lower cost than grain can be purchased or raised in New York State at the present time.

It therefore lowers the cost of maintenance of brood sows and allows a larger herd to be kept and a larger volume of business done. This enables the grower to sell stock at a lower price than could otherwise be done profitably and this benefits not only the grower but his customers as well.

#### DISADVANTAGES

Among the disadvantages are: cost of hauling heavy loads of material of which a large portion may be moisture and materials of little food value; cost of equipment for hauling, which includes heavy team, heavy wagon and harness, special platform rack and suitable covered metal cans; cost of labor, boiler and fuel for cleaning and scalding cans; cost of making and upkeep of suitable feeding platforms and metal tank of sufficient capacity to hold two days' feed.

## TANKAGE AND BONE MEAL FOR HOGS \*

The widespread interest in by-products of animal origin as supplements to corn in swine feeding led the Michigan and Nebraska experiment stations to undertake several tests to determine whether tankage, one of the most important of such materials, and ground bone can be profitably fed.

Tankage is usually prepared from refuse materials from slaughtering, such as digestive organs and their contents, flesh scraps, and some blood, and condemned carcasses which can not be used for human food, by cooking under steam pressure and then drying and grinding until almost as fine as middlings. The tankage used in the Nebraska tests is described by the company producing it as "a concentrated protein meal made from fresh, wholesome pieces of meat trimmed from beef carcasses. It looks much like dark wheat shorts, is shipped in 100-pound sacks, and will keep indefinitely under average conditions of dry storage." The tankage used in the Michigan experiments was guaranteed to contain 60 per cent. protein, 10 per cent. fat, and 6 per cent. phosphates. It was rich in flesh-forming materials and fat, as well as in bone-building material, which is true of tankage generally.

In the first test at the Nebraska Station hogs averaging 170 pounds in weight made an average gain of 65 pounds each in eight weeks on soaked corn, 5.3 pounds of feed being required per pound of gain, and the cost of a pound of gain being 3.76 cents. In the case of a similar lot fed 95 per cent. soaked corn and 5 per cent. tankage, the average gain was 81 pounds per head, the feed required per pound of gain being 4.6 pounds and the cost 3.6 cents. On a ration of 90 per cent. corn and 10 per cent. tankage the average gain in six weeks was 73 pounds per head, the cost of a pound of gain being 4.3 cents and the feed required per pound of gain 5.2 pounds. The pigs were sold for \$4.90 per 100 pounds and E. A. Burnett, who carried on the experiments, calculated that the lowest returns per bushel of corn eaten was

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\* Reprint from Farmers' Bulletin 276, U. S. Department of Agriculture.

47 cents on the ration containing 10 per cent. tankage, and the largest return, 57 cents, on the ration containing only 5 per cent. tankage.

In a second test, which was made with lighter hogs, the average weight being 144 pounds, the gain on corn alone averaged 71 pounds per head in the eight weeks of the test, on the lighter tankage ration 85 pounds, and on the heavier ration 86 pounds. The feed consumed per pound of gain with each tankage ration was 3.7 pounds and with the soaked corn only 4.2 pounds. The cost of feed per pound of gain on the lighter tankage ration was 2.9 cents, on the heavier tankage ration 3.1 cents, and on soaked corn only 3 cents. The calculated return per bushel for corn eaten was 98 cents in the case of the lighter tankage ration, this value being 20 cents greater than in the case of the lot fed no tankage, and 13 cents greater than in the case of the heavier tankage ration.

When shelled corn was fed instead of soaked corn eight pigs, averaging 67 pounds in weight, fed corn and shorts, 4:1, gained 42 pounds per head in eight weeks. With both tankage rations the gains averaged 58 pounds per head. With these rations 3.5 pounds of feed was required per pound of gain, and on corn and shorts 4.6 pounds. The gain was most cheaply made on corn with 5 per cent. tankage, costing 2.7 cents, and was most expensive on corn and shorts, costing 3.4 cents.

In the first of the tests some green sorghum was fed, and in the other cases the pigs were pastured on alfalfa, but no account was taken of the green feed eaten.

The experiments with relatively mature animals all showed that the addition of 5 per cent. tankage to the ration produced cheaper gains than when 10 per cent. tankage was used. With young pigs the gains were made on smaller amounts of food when the larger amount of tankage was added to the ration, but the high cost of the tankage has made the smaller amount of tankage more profitable. \* \* \*

A notable advantage in the feeding of tankage is seen in the more rapid gains made by the hogs and the consequent shortening of the feeding period.

Another argument for tankage is that it is a concentrated protein food. Only a small amount is required to produce the result desired.

In all the experiments made at this station, the hogs fed tankage consumed more feed, made larger gains, and were not easily put off feed, while the hogs fed straight shelled corn were easily thrown off feed after the first six weeks, consumed less feed, and made slower gains. From the limited test made we advise adding the tankage to the soaked corn just before feeding, rather than mixing with the corn before soaking and allowing the tankage time to soak and possibly to become rancid before feeding.

In a test which was undertaken primarily to ascertain the effects of feeds of animal origin on the strength of bones both tankage and ground bone were used. For twelve weeks one lot was fed soaked corn, a second lot soaked corn with 10 per cent. tankage, a third soaked corn with 10 per cent. ground bone, and a fourth soaked corn with 25 per cent. shorts. For the following four weeks 10 per cent. of the corn was replaced with alfalfa hay, but the pigs did not relish the hay, and so the original ration was resumed for five weeks. At the beginning of the test the pigs weighed about 60 pounds each. Considering the whole period, the lots fed corn and corn and shorts gained, respectively, 114 and 132 pounds per head, while those fed tankage and ground bone gained, respectively, 163 and 164 pounds per head. Three of the largest and best hogs in each lot were slaughtered. The average slaughtered weight on corn was 192 pounds, on the tankage ration 247 pounds, on the ground-bone ration 257 pounds, and on the corn and shorts ration 210 pounds.

Tests of the strength of the bones showed that in every case the bones of the hogs fed the grain ration were not as strong as those fed the ration containing animal products. "The feeding of tankage or ground bone to young growing pigs produces a very marked effect on the strength of bone when compared with a corn ration, and its influence is still marked when compared with corn and shorts on alfalfa pasture."

In the Michigan Station tests, the special problem under consideration was the possibility of substituting tankage for skim milk, since, as pointed out by R. S. Shaw, who carried on the work, so much skim milk is now supplied to cheese factories and condensed milk factories, and to supply the demands of cities and towns, that on many farms there is a scarcity of it for feeding young calves and pigs.

In one of the tests with young pigs corn meal, middlings, and tankage, 3:3:1, mixed with water was compared with the same grain ration mixed with skim milk.

In the other tests a ration of middlings and corn meal, 2:1, with the addition of one-eleventh of tankage wet up with water was compared with the same grain ration mixed with skim milk in the proportion of 1 pound of meal to 3 pounds of milk.

On the tankage rations the average daily gain was 0.98 pound and the feed consumed per pound of gain 3.14 pounds. On the meal and skim milk rations the average daily gain was 1.08 pounds per head and the feed required per pound of gain 2.48 pounds of meal and 5.67 pounds of skim milk. In a check test covering ten weeks, in which two lots of 5 pigs each were fed middlings and corn meal, 2:1, mixed to a thick slop with water, 4.09 pounds of meal were required per pound of gain, the average daily gain being 0.8 pound.

The results indicate "that tankage can be used successfully as a substitute for skim milk in the ration for the growing pig from weaning time on," and "that a slightly greater proportion of tankage than one-eleventh of the ration could be fed, increasing the gains somewhat, and still keeping within the cost of production of the skim-milk ration."

In tests with fattening hogs on corn meal and tankage in the proportion of 5:1 and 9:1 compared with rations of corn meal only and with rations of middlings and corn meal, 2:1, with and without the addition of one-eleventh of tankage, the average daily gain per hog on the tankage rations was 1.19 pounds and on the rations without tankage 0.98 pound. The average cost of a pound of gain with tankage was 4.44 cents and without tankage 4.86 cents.

"The gains were greatest in every case where tankage was used in the ration, and this was more and more noticeable as the feeding period was prolonged. \* \* \* In general, the figures given indicate that tankage can be used to good advantage in the ration for the fattening hog as well as for the growing pig."

The favorable results thus obtained at the Nebraska and Michigan stations with animal by-products in hog feeding are in accord with those reported by the Indiana and Iowa experiment stations and summarized in an earlier bulletin of this series.

## THE BERKSHIRE

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Secretary of the American Berkshire Association

### ORIGIN

Originating in Berkshire County, England, more than 100 years ago, the Berkshire is probably the oldest distinct breed of

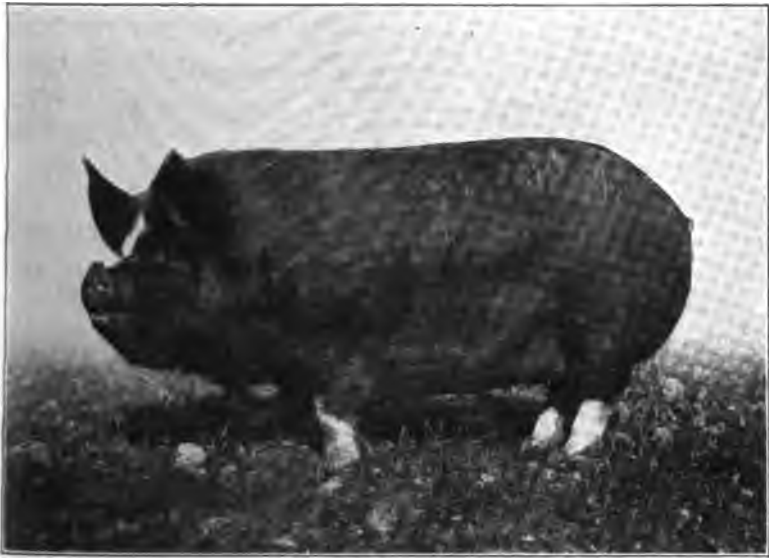


FIG. 25.— BERKSHIRE SOW. OWNED BY F. W. SESSIONS, UTICA, N. Y.

swine. A comparison of the old English Berkshire with the Berkshire as bred in America today, would be a revelation of the possibilities obtainable by careful selection and breeding of different types to secure a desired result.

The Old English Berkshire was large in size, long and deep in body with good hams and good constitution. They possessed fairly good bone, thick shoulders and good bacon sides with a quality of meat which was excellent for that day. They were of a sandy or reddish brown color, spotted with black, their coats rather long and somewhat curly, with a few bristles; and their

ears large, coarse and flopping. They were poor feeders and slow in maturing.

This foundation stock was crossed with individuals of the Siamese, Neapolitan and Chinese breeds from southern Europe, which were of the quick maturing type but smaller in size. The result was a type very like the standard Berkshire of today. However, as is often the case, some breeders noting the good results from crossing with the southern blood carried it too far. This accounts for the short, chunky, undersized Berkshire which a few

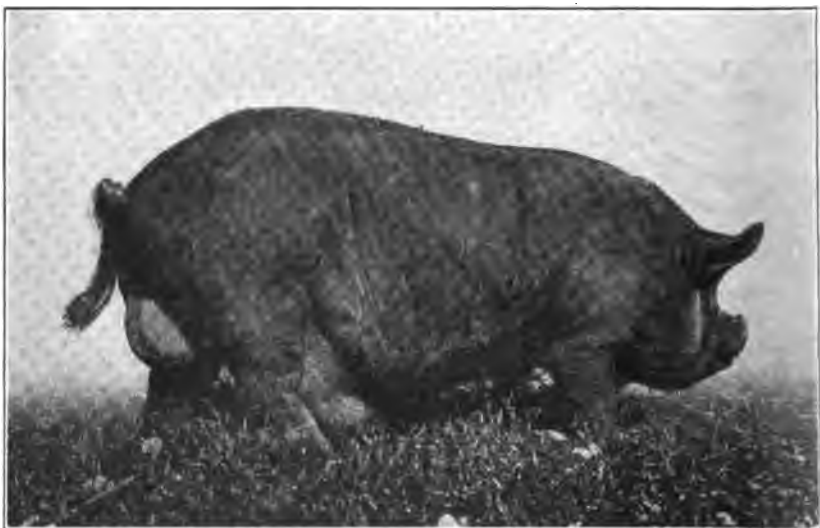


FIG. 26.— BERKSHIRE BOAR. OWNED BY F. W. SESSIONS, UTICA, N. Y.

years ago brought the Berkshire into disrepute among breeders who desired size and quality combined. Fortunately, other breeders with more discrimination came to the rescue, with the result that we have the long body, deep side, short, broad, dished-faced, early maturing Berkshire of today. Combined with the enormous size of the foundation Berkshire stock is the fine quality and docile disposition of the southern infusion.

#### EXCELLENCE AND PROGRESS

The Berkshire is unquestionably the oldest and most widely disseminated of the modern popular breeds of swine. The breed has stood the test of ages and proven its adaptation in practically

every agricultural region on the globe. Its outstanding excellence is universally conceded. Berkshire type and quality have been potent factors in shaping the standards of many of the other breeds, either by imitation or by direct resort to Berkshire blood.

While this is an enviable record it does not warrant a feeling of security. Breeds do not hold prestige by tradition or sentiment. The laws of practical results are inexorable. Berkshires, like all other breeds, must stand on their own merits and win on actual merit, or give way to their rivals. The modern demand for firmer meat of finer texture and quality, free from coarseness and excessive fat, makes the Berkshire a prime favorite with the butcher and packer. The ultimate end of all breeds is the block, and the practical test is not the most pounds on the scales but the highest amount of edible meat on the block with the highest returns in net profit to the producer.

Smooth shoulders are desired because heavy, prominent shoulders produce a rough carcass with an excess of cheap meat. Straight, even side, top, and bottom lines indicate feeding quality and freedom from soft flabby tissue in the carcass. Firm meat of fine fibre and good texture are Berkshire characteristics.

The ear is generally regarded as a point of fancy rather than utility. This is not altogether true. There is a strong tendency toward refinement of type in all breeds of swine. This is manifest in the ear more strikingly than in any other point. The heavy, coarse, pendant ear has been banished from all the standard American breeds. It is a survival of the old unimproved types. A coarse ear indicates a corresponding degree of coarseness of texture throughout the carcass. The law of correlation is certain. This coarseness generally indicates late maturity and an inferior product. It is possible, however, to put too much stress on fine, erect ears and short, dished faces. These features carried to the extreme will tend to a shorter, finer type of hog at the expense of size, weight and breeding quality.

#### WHY BERKSHIRES ARE PREFERRED

Prominent among the good qualities that make Berkshires the leading favorite, the following may be mentioned:

First.—Great muscular power and vitality, enabling them to carry weight and reach market with minimum shrinkage.

Second.—Activity combined with strong digestive and assimilating powers, hence returning a maximum quantity of flesh and fat for food consumed.

Third.—The sows are unsurpassed for prolificacy and for being careful nurses and good sucklers.

Fourth.—Their pigs are strong, active and vigorous at birth.

Fifth.—They can be fattened for market at any age, and yet, if desirable, can be fed to any reasonable weight, from 600 to 1,000 pounds in some instances.

Sixth.—Their flesh is of the highest quality of pork, containing a larger proportion of finely marbled lean and fat than that of any other breed.

Seventh.—Power of the boar to transmit the valuable qualities of the breed to his progeny when crossed with others.

Eighth.—Unsurpassed uniformity in color and markings.



FIG. 27.—BERKSHIRE SOW AND PIGS ON FARM OF F. W. SESSIONS, UTICA, N. Y.

## THE POLAND-CHINA

A. M. BROWN, WINCHESTER, IND.

Secretary of the National Poland-China Record Co.

### ORIGIN

In the Miami Valley, situated in the counties of Butler, Hamilton and Warren, in the state of Ohio, where the farmers were progressive, eagerly seeking for general improvement of the country by increasing the value of their farms and livestock, we find that as early as 1816, the Byfield and Russian hogs were crossed with the Big China, a breed brought into this section by John Wallace, a trustee of the society of Shakers, residing in and about Union Village, located in the said Miami Valley, and described by Cephas Holloway as follows:

"The shipment was comprised of four animals, one boar and three sows, the boar and two sows being entirely white while the other sow had some sandy spots on her, in which appeared some small black specks." These pigs were either imported from China or were the direct descendants of imported stock. Thus we have the produce of the Byfield and Russian crossed upon the Big China.

As early as about 1834, the Irish Grazer was introduced from Ireland. Making a favorable impression it was used to infuse new blood into the new swine found in the aforesaid counties of Ohio, but soon became extinct as a breed. In 1832, Berkshires were introduced and used very liberally in crossing on the swine then found in this section. Their use had much to do with changing the color and shape of the native animal. However, their use was discontinued as early as 1842 and we have no record of any other infusion of a distinct breed since 1845.

The Miami Valley breeders had accomplished what they desired by the use of all these breeds and found that from such combination they had succeeded in harmoniously blending the many good qualities of each into a breed which, for symmetry, docility, prolificacy and beauty, fully met their ideal. Pleasing

to look at but with enough vim and vigor to carry them to market; good feeders, fattening readily at any age desired and, in short, satisfactory and profitable.

#### NAME ESTABLISHED

With the breed once thoroughly established the next thing in order was to name it.

We have no history of any Poland swine, but simply the fact that a Polander by birth, who resided in Butler County, Ohio, was fortunate enough to produce a boar of this popular breed which he sold to the Shakers at Union Village and which was always referred to as the Poland Pig. A little later the term China was added and in 1872 the name Poland-China was formally recognized and accepted in a National Swine Breeders' Convention, assembled at Indianapolis, Indiana, and by the action of this convention the name was forever fixed and determined.

This then new breed of hogs was dark-spotted with many nearly white, but the fancies of men demanded them darker in color; so the most alert breeders set about to breed them black with white points, which they accomplished.

From the time this popular breed was established and named, size and easy feeding qualities were uppermost in the minds of the Poland-China breeders; but in the early eighties, showmen and fanciers began to agitate the color question so vigorously that a score card came into existence and a standard of excellence was adopted by all the associations of the breeds, which ruled in favor of uniformity of color, fine tipping ears, sleek coat and many minor points from the view of value as affects the production of pork.

Seemingly, all, or nearly all the breeders drifted with the tide; they secured what they were striving for — a fixed type — but in so doing the above points of size and fattening qualities were somewhat lost sight of until soon after the close of the century, when the farmers began to find fault with what had been for many years the most popular breed of swine in the world.

Breeders were not slow to see that mistakes had been made and eagerly set about to correct them. It did not require much time to very materially increase the size, but in doing this breeders



FIG. 28.—POLAND-CHINA SOW, NEW YORK STATE FAIR, 1913.



FIG. 29.—TYPICAL POLAND-CHINA BOAR.

have been very careful to continue to maintain uniformity and quality. All these changes but serve to prove that earnest, consistent, constant care from the mind and hands of men will be richly rewarded for all their patience and efforts; in other words, the skill of man will produce the heart's desire if he but set about for it with a determined will. We find what we look for.

Hence, today we find the Poland-China, not only possessed of size, quality, uniformity and docility, but prolific and readily fattened at any age to produce in abundance, meat and lard of a much sought for quality, without a peer in all the world. We do not claim for it any special merits as a bacon hog, but are content to leave this special quality to some other breed without much merit except for bacon — one that can be reared in lands not overflowing with Indian corn, oats and clover, which the great pork belt of America supplies in such abundance and which is expected to produce the pork and lard to supply the world in a large measure.

#### RECORD ASSOCIATION

Early in the seventies, Carl Freigau, together with the various Ohio breeders of this popular hog, began to agitate the matter of forming a reliable record for Poland-Chinas. Much diligence and great care were exercised to bring together sufficient reliable information upon which to build a permanent record.

Mr. Freigau made a personal inspection of the herds, and by the firesides of the various breeders worked out the plan and secured the original information for the first volume which he compiled and, together with M. J. Lawrence, publisher of the Ohio Farmer, issued in 1878. This volume was small but of great worth. It is still much prized by our oldest breeders and would be interesting to our new ones as well.

Almost immediately upon the completion of this first volume, the Ohio Farmer published a call meeting of the Poland-China breeders, to be held at the Phillips House, Dayton, Ohio. This meeting was well attended by the earnest and enthusiastic breeders, who proceeded at once to frame a constitution and adopt by-laws governing an association which they then organized and called The Ohio Poland-China Record Company. The preamble to such constitution reads as follows:

"Recognizing the following indisputable facts: first, that the breed of Poland-China swine had its origin in the Miami Valley and State of Ohio; second, that the superior excellence of this breed has created throughout the United States and other lands an increasing demand for it; third, that the experience of the last forty years warrants our claim that the breed in its purity, as found in our herds, will transmit with reasonable certainty its several and peculiar points of excellence; fourth, that the highest development and most rapid improvement of any breed of animals can only be secured by careful selection and judicious breeding from families of acknowledged excellence and purity of blood; and to enable us to avoid animals of impure blood, to keep clear of hereditary taint and weakness, and to furnish, as far as possible, full and complete knowledge of ancestral lines, which can only be furnished by a record of pedigrees open to public inspection and criticism; to encourage and protect careful men against reckless breeders and disreputable venders of ill-bred swine, and looking to honest, enterprising breeders, for a recognition of the fact that correct and full pedigrees of Poland-China swine have become a most important factor in the successful breeding and selling of these animals; to enable the breeder to trace the lineage of all well-bred Poland-China swine back to the Miami Valley; and especially to perpetuate the work so auspiciously begun in the publication of Volume One of the Ohio Poland-China Swine Record."

It was signed by the breeders present, who proceeded with the organization and election of the proper officers.

Various meetings of the officers in charge, were held during the year and soon the second volume was issued, upon the completion of which the record for Poland-Chinas was duly launched upon a sound, reliable and true basis, while the popular hog was everywhere hailed with renewed enthusiasm.

An association for a like purpose was soon organized at Indianapolis, Indiana, and called the Central Poland-China Record Association. Both organizations continued to prosper and issue volumes annually until the Ohio Record Company had issued twenty-seven consecutive annual volumes of pedigrees and the Central Poland-China Association twenty-six, when on January

24, 1906, the two records were joined under the name of National Poland-China Record Company, which concern enjoys the continued patronage of those who formerly belonged to either association and is giving to the Poland-China fraternity a comprehensive, tabulated pedigree and certificate which proves to be generally appreciated and satisfactory. A. M. Brown of Winchester, Indiana, secretary of the association, will be pleased, not only to receive pedigrees for record and answer any and all questions regarding the breed and its records, but to be of general help and assistance to all present or prospective breeders of this, the most popular and profitable of hogs grown throughout the hog and corn belt of the world.

## SCALE OF POINTS

Head and Face.....	4	Feet and Legs.....	10
Eyes.....	2	Tail.....	1
Ears.....	2	Coat.....	2
Neck.....	2	Color.....	2
Jowl.....	2	Size.....	5
Shoulders.....	6	Action and Style.....	4
Chest.....	12	Condition.....	4
Back and Loin.....	15	Disposition.....	3
Sides and Ribs.....	8		
Belly and Flank.....	6	Total.....	100
Ham and Rump.....	10		

## THE ESSEX\*

CHARLES S. PLUMB, COLUMBUS, OHIO

Professor of Animal Husbandry, College of Agriculture of the Ohio State University

The native home of the Essex pig is in the county of Essex in eastern England, lying just northeast of London. The land is level or rolling and the climate temperate and moist.

The early native type of Essex pig is said to have been of mixed color, black and white, with white shoulders, nose, and legs. It was roach-backed, flat-ribbed, had long legs, a sharp head, was coarse in bone, was a large feeder, and had a nervous disposition.

### IMPROVEMENT OF THE BREED



FIG. 30.—ESSEX BOAR.

The improvement of the Essex pig was first secured by Lord Western, formerly an Essex squire, who, when in Italy in 1830, purchased a pair of black Neapolitans, male and female, and brought them to England. The Neapolitan was then

crossed upon some well-selected pigs such as were common in Essex, with most satisfactory results. It is also thought that Black Suffolk and Berkshire blood was used. The white coloring was entirely removed and a black Essex-Neapolitan pig of the improved form resulted, with shorter head and legs, more quality, and fattening much more readily. These improved pigs were very popular for a time. They were inbred, however, at least in Lord Western's hands, and became of enfeebled constitution, lacking in fecundity and in size.

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\* Reprint from *Types and Breeds of Farm Animals*, by Professor Plumb, published by Ginn & Co., New York City.

## ESTABLISHMENT OF THE IMPROVED BREED

The establishment of the Improved Essex breed was accomplished by Mr. Fisher Hobbes of Boxted Lodge, a tenant of Lord Western. Even prior to 1840 he began to use Essex-Neapolitan boars on hardy, high-class Essex sows. By careful selection and mating he developed what became famous as the Improved Essex breed. Lord Western died in 1844 and on his death Hobbes purchased his best breeding sows. This improved form had more size and constitution than the original Essex-Neapolitan, and for more than twenty years this was maintained by selection from three distinct families. In 1840 Mr. Hobbes received first prizes on a boar and sow at the Royal Agricultural Society Show at Cambridge, which gave the breed much fame. Since the time of Mr. Hobbes this breed has become distributed in England, especially in Suffolk county, adjoining Essex, where the leading breeders reside. In England today the Essex is generally known as the Small Black breed or Black Suffolk.

## INTRODUCTION TO AMERICA

The introduction of the Essex pig to America dates back to early in the last century. The old-fashioned type of Essex, it is thought, was owned about 1820 in Massachusetts, John Prince having a crossbred sow, part Essex, part Chinese. In 1839 Henry Parsons of Canada imported and kept Essex pigs near Massillon, Ohio. In 1886 S. M. Shepard wrote that of recent years a number of importations had been made and a few herds kept in New York, Michigan, Wisconsin, Kentucky, Tennessee and a few other states. One of the extensive breeders and importers of twenty-five years ago was William Smith of Michigan. At the present time one hears little of the breed in America, neither is it often seen in the exhibits of swine at the fairs or livestock shows.

## CHARACTERISTICS

This breed has certain very distinguishing features. The *color* is entirely black. The *head* is rather short, the *face* is slightly dished, the *forehead* is broad, and the *ears* are small, fine and carried erect. The *jowl* is rather broad and full. The *neck* is

short, the *back* very broad and somewhat short and strongly carried, while the *sides* are deep and short. The *shoulders* are well laid and thickly fleshed, and the *hams* are thick and deep and of superior merit. The *legs*, which tend to be rather short, show bone of fine quality. In *form* the Essex is distinctly of the thick-fleshed, fat, chunky sort, and perhaps no breed in England has been fattened to so high a degree. Owing to excessive flesh development the litters gradually became weak and enfeebled constitution finally resulted.

The size of the Essex pig is small compared with the Poland-China or Berkshire, ranking among the smaller breeds. In 1860 Samuel Sidney wrote that "with age they attain considerable weight and often make 500 pounds at 24 months old." The Emperor, a boar bred by Fisher Hobbes, Sidney states is 2 feet 8 $\frac{1}{4}$  inches high at the shoulder and 6 feet 1 inch long. Mr. F. D. Coburn quotes William Smith, an extensive breeder of Essex in Michigan, that these pigs often reach a weight of 400 to 500 pounds. Doctor Chase of Kansas places their weight under ordinary treatment, when full grown, at 250 to 275 pounds.

The special field for the Essex seems to be in the hands of the small breeder or feeder. This is the case in England as well as in America. The type is not so well suited to severe conditions as some other breeds.

The maturing qualities of the Essex are noteworthy, the breed having been famous for early maturity since the improvement first effected by Lord Western. Feeders easily mature at six months.

#### FEEDING QUALITIES

The Essex as feeders rank high in combining early maturity with great flesh production. The capacity of the breed to lay on flesh has not been placed on record by American investigators, but it has long been famous as a profitable feeding kind, although producing a fatter pork than is at present in favor abroad. The temperament of the Essex is very docile, which naturally promotes easy as well as profitable feeding.

## QUALITY OF THE MEAT

The quality of Essex meat is fine and of excellent flavor, but a large per cent. of fat to lean meat prevails, unless care is exercised in the kind of foods fed. Mr. J. A. Smith of Ipswich, England, who breeds and shows Essex, is quoted by Professor Long as saying that "one objection which is urged against the breed is their tendency to produce an undue proportion of fat, consumers complaining that the bacon is not sufficiently streaky."

## CROSSBREEDS

The crossbred or grade Essex pig may be of considerable comparative value. A half century ago it is said that the Berkshire breed was much improved by Essex blood. In fact Essex blood, as improved by Lord Western and Fisher Hobbes, is said to have been responsible for much of the improvement through crossing or grading in the herds of England. It is a well-established fact that the Essex used on the coarser, rougher type imparts quality and early maturity.

## FECUNDITY

The fecundity of the Essex pig became impaired by its excessive development in fat production, a criticism made against the breed years ago. Mr. Smith, already quoted, says that his pigs, when properly managed, are very prolific, fifteen or sixteen being frequently in the litter, although ten to twelve is a fair number. The breed, however, does not stand high in this respect, being ranked below the Berkshire. As nurses the Essex sows are regarded as simply medium, not as a rule yielding an abundance of milk. The fecundity of individuals and their capacity to nurse young will depend in a measure on the character of food fed and condition of body.

## ORGANIZATIONS

Organizations to promote Essex swine exist in America and England. The American Essex Association was organized in 1887 and has a small following. It has published two volumes of the herdbook and has registered about 1,500 animals in these volumes. In England the National Pig Breeders' Association officially represents the breed.

## DISTRIBUTION

The distribution of Essex pigs is quite widespread. They are found in England in a small way in various counties, notably in Essex and Suffolk. They have also been exported to France and other European countries and to Canada and Australia. In the United States a few herds are found in Michigan, Indiana, Texas, Nebraska, Alabama, Ohio and elsewhere. The breed has met with favor in the South.

## THE OHIO IMPROVED CHESTER

O. C. VERNON, GOSHEN, INDIANA.

Secretary of the O. I. C. Swine Breeders' Association



There seems to be not a little misunderstanding among many breeders of the white hog, as to the distinction existing between the Chester White and the Ohio Improved Chester.

Some believe that the distinction is one of name only; others are convinced that the difference is determined by the association in which the animal is recorded. Both of these impressions are wrong as the following history will disclose.

In the year 1865, Mr. L. B. Silver, then of Salem, Ohio, took an extended trip through the eastern states, visiting the best known herds of the various breeds of throughbred swine. The object in view was the development of a breed that would most nearly meet the general requirements of the farmer and stock grower.

Mr. Silver was an expert on the laws and their application, governing the reproductive transmission of certain qualities in domestic animals. His ideal was a perfectly uniform type of white hog. To this end a herd was selected, the individuals thereof bred and such of the offspring again selected as more nearly approached the ideal type. Additions were made to the herd and the process repeated, weeding and discarding undesirable types until the parent stock of the O. I. C. breed was evolved. These animals were in turn selected and re-selected through a period of many years, nothing being neglected that would advance the general perfection of the breed.

The successful development of a new breed of hogs is a task requiring keen judgment, untiring patience and excellent perception. That the late L. B. Silver possessed these qualities in a

large measure is evidenced by the wonderful success which attended his efforts. The Ohio Improved Chester, or O. I. C., as it is popularly known, has rapidly come to the front as one of the leading breeds of American swine.

The object was to breed a hog that would be most likely to meet the wants of the farmer or stock-breeder, feeling sure that it would be successful in establishing a *uniform perfect type*, combining a perfect form, well developed hams and shoulders, nicely proportioned head and ears, easy fattening qualities, round ribs, small offal, and yet retain the great length and size, a triumph would



FIG. 31.—TWO-MONTH-OLD O. I. C. SOWS. OWNED BY B. F. PHILLIPS & SONS, EAST BLOOMFIELD, N. Y.

be gained that would be appreciated by thousands of the farmer and stock breeders of America and other portions of the world. How near success has been attained almost numberless letters from every state in the Union and foreign countries, extolling the O. I. C.'s, giving them preference over all other breeds of swine, sufficiently testify. In several instances, a single O. I. C. has made over a thousand pounds of dressed pork, at less than two years old, and yet these enormously large hogs retain the other desirable properties referred to. How was this attained? Simply, as heretofore stated, by making such selections as embodied the properties desired, and by making the laws governing breeding a study and putting same into practice; and by careful selections and adhering strictly to the laws governing breeding.

O. I. C.'s are white, and are noted for rapid growth, large shoulders and hams, round ribs, head and offal parts small, giving the animal a round, symmetrical appearance—withal a truly valuable hog.



FIG. 32.—O. I. C. BOAR, TWELVE MONTHS, WEIGHT 325 POUNDS. OWNED BY B. F. PHILLIPS & SONS, EAST BLOOMFIELD, N. Y.

#### LATEST REVISED SCORE CARD

##### *Standard of Perfection*

Scale of Points adopted by the O. I. C. Swine Breeders' Association at its regular annual meeting held in Chicago, Ill., December 3, 1913.

##### *Scale of Points*

Head and Face.....	4	Feet and Legs.....	9
Eyes . . . . .	2	Tail . . . . .	1
Ears . . . . .	2	Coat . . . . .	3
Neck . . . . .	2	Color . . . . .	2
Jowl . . . . .	2	Size . . . . .	8
Shoulders . . . . .	6	Action and Style.....	3
Chest . . . . .	12	Condition . . . . .	2
Back and Loin.....	14	Disposition . . . . .	2
Sides and Ribs.....	9	Symmetry . . . . .	3
Belly and Flank.....	4		
Ham and Rump.....	10	Total . . . . .	100

### *Detailed Description*

*Head and Face.*—Head short and wide; cheeks neat; jaw broad and strong; forehead medium, high and wide; face short and smooth; nose neat, tapering and slightly dished.

*Objections.*—Head long, narrow, or coarse; cheeks too full; forehead low and narrow; jaws contracted and weak; face long narrow and straight; nose coarse, clumsy or dished like Berkshire.

*Eyes.*—Bright, large, clear and free from wrinkles or overhanging fat.

*Objections.*—Small, deep set, surrounded by wrinkles or fat.

*Ears.*—Drooping at tip to give graceful appearance; thin, soft; pointing outward and forward; well proportioned to size of body.

*Objections.*—Too large and coarse; thick, lopping; lying too near the face; stiff, erect, or too small. Not under control.

*Neck.*—Wide; deep; short and nicely arched; neatly tapering from shoulder.

*Objections.*—Narrow; thin; long; flat on top; tucked up; not extending down to breast bone.

*Jowl.*—Smooth; neat; firm; full; carrying fullness well back to shoulders and brisket when head is carried up level.

*Objections.*—Light; rough and deeply wrinkled; too large and flabby; not carrying fullness back to shoulders and brisket.

*Shoulders.*—Broad; deep, and full; extending in line with the side and carrying size down to line of belly.

*Objections.*—Deficient in width or depth; extending above line of back; thick beyond line of sides and hams; shields on boars too coarse and prominent.

*Chest.*—*Heartgirth.*—Large, wide, deep and full; even under line to the shoulder and sides with no creases; giving plenty of room for the heart and other organs, making a large girth indicating much vitality. Brisket smooth, even and broad; wide between the legs and extending well forward showing in front.

*Objections.*—Pinched appearance at the top or bottom, or tucked in back of forelegs; showing too narrow between the legs; not deep enough back of the shoulder. Brisket uneven, narrow and not prominent.

*Back and Loin.*—Broad; straight or slightly arched; uniform width; free from lumps or rolls; same height and width at shoulder as at ham.

Objections.—Narrow; swayed; humped; creasing back of shoulders; sun-fish shaped; uneven width; lumps or rolls.

*Sides.*—Full; smooth; deep; carrying size down to line of belly; even with line of ham and shoulder.

Objections.—Flat; thin; flabby; uneven surface; compressed at bottom; shrunken at shoulder and ham.

*Ribs.*—Long; well sprung at top and bottom; giving animal a square form.

Objections.—Too short; flat.

*Belly.*—Same width as back; full; straight; drooping as low at flank as at bottom of chest; line of lower edge running parallel with sides.

Objections.—Narrow; pinched; sagging or flabby.

*Flank.*—Full and even with body; equalling heartgirth.

Objections.—Thin, tucked up or drawn in; less than heartgirth or length of body from top of head to root of tail.

*Ham and Rump.*—Broad; full; long; wide and deep; admitting of no swells; buttock full, neat and clean; stifle well covered with flesh, nicely tapering toward the hock; rump slightly rounding from loin to root of tail, same width as back, making an even line with sides.

Objections.—Narrow; short; not filled out to stifle; too much cut up in crotch or twist; not coming down to hock; buttocks flabby; rump flat, narrow, too long, too sharp or peaked at root of tail.

*Legs.*—Medium length; strong and straight; set well apart and well under body; bone of good size; firm; well muscled; wide above knee and hock, round and tapering below knee and hock, enabling the animal to carry its weight with ease; pasterns short and nearly upright.

Objections.—Too short or too long; weak; crooked; too close together; muscles weak; bone too large and coarse, without taper; pasterns long, crooked or slim.

*Feet.*—Short; firm; tough; animal standing well up on toes.

Objections.—Hoofs long, slim, weak; toes spreading, crooked or turned up.

*Tail.*— Small, smooth; nicely tapering; root slightly covered with flesh; carried in a curl.

Objections.— Coarse; too long; clumsy; straight.

*Coat.*— Fine; either straight or wavy with preference for straight; evenly distributed and covering the body well.

Objections.— Bristles; swirls; hair coarse, thin, standing up, not evenly distributed over all the body except the belly.

*Color.*— White. Red or black spots in hair disqualify, but blue spots in hide (commonly known as freckles) while objectionable and should be discouraged do not argue impurity of blood.

Objections.— Color any other than white.

*Size.*— Large for age and condition. Boar two years and over, if in good flesh should weigh not less than 500 pounds; sows same age and condition not less than 450 pounds. Boars eighteen months old, in good flesh, should weigh not less than 400 pounds; sows, 350. Boars twelve months old, not less than 350 pounds; sows, 300. Boars and sows six months old not less than 150 pounds each, and other ages in proportion.

Objections.— Overgrown, coarse, uncouth, hard to fatten.

*Action.*— Easy and graceful; high carriage; active; gentle and easily handled. In males testicles should be readily seen, and of same size and carriage.

Objections.— Sluggish; awkward; low carriage; wild; vicious. In males, testicles not distinctly visible, or not of same size and carriage.

*Condition.*— Healthy and mellow touch, fat evenly laid on.

Objections.— Harsh to touch, flabbiness, fat in lumps on back or sides.

*Disposition.*— Quiet and gentle.

Objections.— Cross, restless, quarrelsome.

*Symmetry or Adaptation of Points.*— The adaptation of all of the points, size and style combined to make the desired type of model.

## THE CHESTER WHITE

F. F. MOORE, ROCHESTER, INDIANA

Secretary of the Chester White Swine Record Association

### ORIGIN OF SOME OF THE CHESTER WHITE RECORD ASSOCIATIONS

This breed of swine dates back to the pioneer days of the New England states of North America. It was being bred largely in



FIG. 33.—CHESTER WHITE SOW AND PIGS.

its purity when it derived its name, 1848, in Chester County, Pennsylvania. The excellent characteristics that these hogs demonstrated for 40 years proved to be so popular that a Record Association was started in 1884 to perpetuate the breeding of the worthy animals. This association was and is now known as the National Chester White Record to which all animals of this breed trace.

As the western breeders became more interested in this breed, several men visited the herds of Chester County, Pennsylvania, and made choice selections. Some ordered by mail and started

new herds in the West, and far West. Among the men who first became interested in the Chester Whites were S. H. Todd, L. B. Silver, and L. H. Martin of Ohio; Richard Russell, Samuel Kyger and the Harlows of Indiana; M. E. Newburn, J. W. Dorsey and John Jackson of Illinois, and B. R. Vale and Wm. A. Hoover of Iowa. Other men in these states and other western states bought good and bred better, and did all their recording in

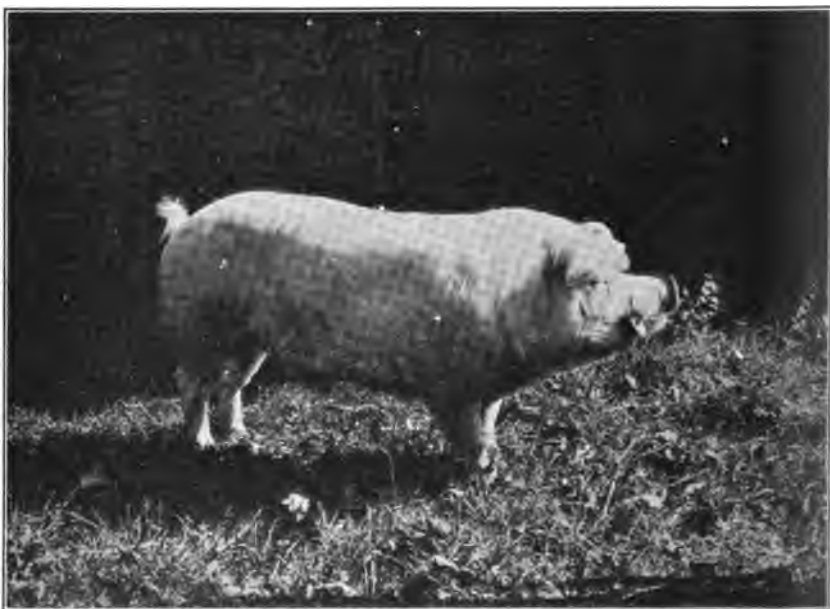


FIG. 34.—CHESTER WHITE BOAR.

the National Chester White Record Association at West Chester, Pennsylvania.

Of the above men L. B. Silver and S. H. Todd of Ohio, each conceived the idea of starting a new record association to represent the herds that he had built up. Mr. Todd with a few Ohio breeders started a Record Association in 1885 for his "Todd's Improved Chester Whites" as he learned to call them. Mr. Silver started a Record Association in 1891 for his "International Ohio Improved Chesters," which are now commonly called O. I. C.'s.

The names of these record associations have been changed from their original names, largely due to the above names given by these two Ohio breeders. The similarity in name being so near, Mr. Silver's strain became known as the Silver strain or the O. I. C.'s, and Mr. Todd's strain were known as the Todd's strain and later known as the Chester Whites.

The International Ohio Improved Chester Swine Record Association of 1891 has become known as the O. I. C. Swine Breeders' Association now located at Goshen, Indiana.

The Todd Record Association became known as the American Chester White Record Association, which with the Standard Chester White Record Association consolidated January 15, 1913, and is now known as the Chester White Swine Record Association, located at Rochester, Indiana.

The Chester White Swine Record Association recognizes all honest pedigrees sent in by reputable breeders whether they are called O. I. C. or Chester White pedigrees.

Much credit must be given to the loyal members of the Standard and American Associations in bringing about a consolidation of the two record associations that has already proven a great blessing in promoting the welfare of this breed of swine.

#### CHARACTERISTICS OF THE BREED

Prolificness and per cent. of farrow raised.

Unequaled in disposition and in adapting themselves to their environments.

A breed that will fatten at any age and produce the high quality of meat and lard that the world demands.

As a packer's carcass, no breed of swine has made the showing this breed has with the competition open to the world.

As a commission hog, carload lots bring a premium and the local buyers will pay a premium on wagonload lots.

As a butcher's carcass, they are preferred not only in his show window but on his block.

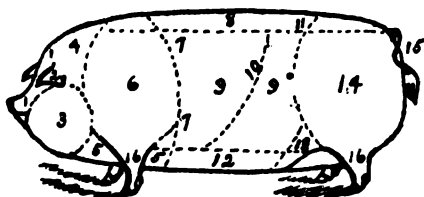
As to the family consumption no breed has its equal.

The largest firms producing the aristocratic sausages for the world use the meat of pure-bred Chesters.

As fat barrows, pure breeds, grades and cross breeds, no breed has to its honor the number of "first" premiums that the Chester White breed of hogs have at the Internationals at Chicago, in classes open to the world.

It is the only breed that is "split up" into so many factions by virtue of the multiplicity of record associations of which some are catering to its trade for revenue only.

It is a breed that has gained its popularity, largely by demonstrating its own value, in the new territories, and not by the unit of action and the boosting of its earlier breeders.



1—Head.  
2—Ears.  
3—Jowl.  
4—Neck.

5—Brisket.  
6—Shoulder.  
7—Heartgirth.  
8—Back.

9—Sides.  
10—Ribs.  
11—Loin.  
12—Belly.

13—Flank.  
14—Ham.  
15—Tail.  
16—Legs.

#### SCORE CARD

Scale of points as adopted by the Chester White Record Association at its adjourned meeting held in Chicago, Illinois, December 1, 1913. Also adopted by the O. I. C. Swine Breeder Association at its regular annual meeting held in Chicago, Illinois, December 3, 1913.

#### SCALE OF POINTS

Head and Face.....	4	Feet and Legs.....	
Eyes . . . . .	2	Tail . . . . .	
Ears . . . . .	2	Coat . . . . .	
Neck . . . . .	2	Color . . . . .	
Jowl . . . . .	2	Size . . . . .	
Shoulders . . . . .	6	Action and Style.....	
Chest . . . . .	12	Condition . . . . .	
Back and Loin.....	14	Disposition . . . . .	
Sides and Ribs.....	9	Symmetry . . . . .	
Belly and Flank.....	4		
Ham and Rump.....	10	Total . . . . .	100

## DETAILED DESCRIPTION

*Head and Face.*—Head short and wide; cheeks neat; jaws broad and strong; forehead medium, high and wide; face short and smooth; nose neat, tapering and slightly dished.

Objections.—Head long, narrow or coarse; cheeks too full; forehead low and narrow; jaws contracted and weak; face long, narrow and straight; nose coarse, clumsy or dished like a Berkshire.

*Eyes.*—Bright, large, clear and free from wrinkles or overhanging fat.

Objections.—Small, deep set, surrounded by wrinkles or fat.

*Ears.*—Drooping at tip to give graceful appearance; thin; soft; pointing outward and forward; well proportioned to size of body.

Objections.—Too large and coarse; thick, lopping; lying too near the face; stiff, erect, or too small. Not under control.

*Neck.*—Wide; deep; short and nicely arched; neatly tapering from shoulder.

Objections.—Narrow; thin; long; flat on top; tucked up; not extending down to breast bone.

*Jowl.*—Smooth; neat; firm; full; carrying fullness well back to shoulders and brisket when head is carried up level.

Objections.—Light; rough and deeply wrinkled; too large and flabby; not carrying fullness back to shoulders and brisket.

*Shoulders.*—Broad; deep and full; extending in line with the side and carrying size down to line of belly.

Objections.—Deficient in width or depth; extending above line of back; thick beyond line of sides and hams; shields on boars too coarse and prominent.

*Chest — Heartgirth.*—Large, wide, deep and full; even under line to the shoulder and sides with no creases; giving plenty of room for the heart and other organs, making a large girth, indicating much vitality. Brisket smooth, even and broad; wide between the legs and extending well forward showing in front.

Objections.—Pinched appearance at the top or bottom, or tucked in back of forelegs; showing too narrow between the legs, not deep enough back of the shoulder. Brisket uneven, narrow, not prominent.

*Back and Loin.*—Broad; straight or slightly arched; uniform width; free from lumps or rolls; same height and width at shoulder as at ham.

Objections.—Narrow; swayed; humped; creasing back of shoulders; sun-fish shaped; uneven width; lumps or rolls.

*Sides.*—Full; smooth; deep; carrying size down to line of belly; even with line of ham and shoulder.

Objections.—Flat; thin; flabby; uneven surface; compressed at bottom; shrunken at shoulder and ham.

*Ribs.*—Long; well sprung at top and bottom; giving animal a square form.

Objections.—Too short; flat.

*Belly.*—Same width as back; full; straight; drooping as low at flank as at bottom of chest; line of lower edge running parallel with sides.

Objections.—Narrow; pinched; sagging or flabby.

*Flank.*—Full and even with body; equalling heartgirth.

Objections.—Thin, tucked up or drawn in; less than heartgirth or length of body from top of head to root of tail.

*Ham or Rump.*—Broad, full, long, wide and deep; admitting of no swells; buttock full, neat and clean; stifle well covered with flesh, nicely tapering toward the hock; rump slightly rounding from loin to root of tail, same width as back, making an even line with sides.

Objections.—Narrow; short; not filled out to stifle; too much cut up in crotch or twist; not coming down to hock; buttocks flabby; rump flat, narrow, too long, too sharp or peaked at root of tail.

*Legs.*—Medium length; strong and straight; set well apart and well under body; bone of good size; firm; well muscled; wide above knee and hock, round and tapering below knee and hock, enabling the animal to carry its weight with ease; pasterns short and nearly upright.

Objections.—Too short or too long; weak; crooked; too close together; muscles weak; bone too large and coarse, without taper; pasterns long, crooked or slim.

*Feet.*—Short; firm; tough; animal standing well up on toes.

Objections.—Hoofs long, slim, weak; toes spreading, crooked or turned up.

*Tail.*—Small; smooth; nicely tapering; root slightly covered with flesh; carried in a curl.

*Objections.*—Coarse; too long; clumsy; straight.

*Coat.*—Fine; either straight or wavy with preference for straight; evenly distributed and covering the body well.

*Objections.*—Bristles; swirls; hair coarse, thin, standing up, not evenly distributed over all the body except the belly.

*Color.*—White. Red or black spots in hair disqualify, but blue spots in hide (commonly known as freckles) while objectionable and should be discouraged do not argue impurity of blood.

*Objections.*—Color any other than white.

*Size.*—Large for age and condition. Boar two years and over, if in good flesh, should weigh not less than 500 pounds; sow same age and condition, not less than 450 pounds. Boars eighteen months old, in good flesh, should weigh not less than 400 pounds; sows, 350. Boars twelve months old, not less than 350 pounds; sows, 300. Boars and sows six months old not less than 150 pounds each, and other ages in proportion.

*Objections.*—Overgrown, coarse, uncouth, hard to fatten.

*Action.*—Easy and graceful; high carriage; active; gentle and easily handled. In males testicles should be readily seen, and of same size and carriage.

*Objections.*—Sluggish; awkward; low carriage; wild; vicious. In males, testicles not distinctly visible, or not of same size and carriage.

*Condition.*—Healthy and mellow touch, fat evenly laid on.

*Objections.*—Harsh to touch, flabbiness, fat in lumps on back or sides.

*Disposition.*—Quiet and gentle.

*Objections.*—Cross, restless, quarrelsome.

*Symmetry or Adaption of Points.*—The adaption of all the points, size and style combined to make the desired type or model.

#### DISQUALIFICATIONS FOR REGISTRY

1. Sows scoring less than 60 points.
2. Boars scoring less than 70 points.
3. Red or black hair in coat.
4. Barren or stunted animals.

## THE CHESHIRE

E. S. HILL, FREEVILLE, N. Y.

Secretary of the Cheshire Swine Breeders' Association

The Cheshire, which is considered by those well acquainted with its merits to be one of the best breeds of swine in America, was originated in New York in the early fifties and was first classed and exhibited at state fairs in 1859, when their fine appearance and the excellence of their general makeup made a very favorable impression.



FIG. 35.— CHESHIRE SOW.

Very little booming of the breed was ever made. It had the good fortune to be established and maintained by a class of breeders who were more interested in improving and perfecting than in making sales of their favorites.

In the East and middle West they have steadily gained in popularity on their merits as money-making pork producers and improvers of established herds of hogs.

The Cheshire is a long, deep-bodied hog of strong constitution and great heart girth; straight in the back, full, but finely rounded hams; white hair; thin, pink skin, free from wrinkles; ears erect,

nose medium and face dished; fine strong bones, which will hold them up on their feet even when confined continuously in pens.

As business hogs they easily adapt themselves to any condition and are good, active feeders in pasture or pen. They are especially noted for their early maturity, quick fattening, and great power of assimilation, thus producing a pound of gain at the lowest cost.

The accompanying photograph shows an eight months old pig that made a growth of 353 pounds, an average of one and one-



FIG. 36.—CHESHIRE BOAR.

half pounds per day. For shorter tests we have records of gains of from twelve to fifteen pounds per week, and one Indiana breeder writes me that his Cheshires were growing three pounds each per day.

The quality of their meat is firm in texture, tender, and of finest flavor. Enough difference is noticeable where the Cheshire is used in the market to create a demand from the butcher and his customers. One butcher says, "I like them best because of the neat and clean appearance of the carcass when hung up, the small percentage of waste and large amount of choice cuts which

bring the higher prices. I find their meat is streaked with fat and lean, and the fat is not of the soft lardy kind. My customers are pleased with the quality and small amount of bone; they are the best sellers I can get."

As breeders they are prolific. Sows with first litters will raise from five to ten pigs, and mature sows will raise, feed, and grow two litters of from twelve to fifteen per year.

The sows are of a kind and quiet disposition. I often stay with my sows at farrowing time when it is cold, covering the sow and her little ones with a blanket. I seldom have one step on or lie on a pig, and have never had a Cheshire eat her young.

They are strongly bred to their type. The breeders have worked in harmony in selecting, mating and raising them to a uniformly high standard of excellence.

Sows of all breeds and colors have been bred to my boars, but the pigs have been solid white without exception, always resembling the Cheshire in form and build.

At the New York State Winter and Fat Stock Fair of 1905-6, the championship for dressed carcasses both light and heavy weight, was won by the Cheshires. At Chicago, with 70 animals in competition they won first for carcass under 200 pounds, also championship over all for dressed carcasses; the winner of the latter dressed the unusual percentage of 90.23 pounds to the hundred.

The Cheshire Swine Breeders' Association is an incorporated society in good standing with the sixth volume of pedigrees just printed.

The Cheshire Herd Book was established in 1884. The association, incorporated in 1898, has now the best of standing, being recognized as a standard recording society.

#### STANDARD OF EXCELLENCE

The standard of excellence as adopted is: head, short to medium in length, short in proportion to length of body; face somewhat dished and wide between the eyes; ears small, erect, in old animals often slightly pointed forward; neck short; shoulders broad and full; hips broad; body long, broad and deep; hams broad, nearly straight with back, and running well down towards

hock; legs long and slim, set well apart and supporting the body on the toes; tail small and slim; hair fine, medium in thickness and quantity; color white. When grown and well fattened, should dress from 400 to 600.

## SCALE OF POINTS

1. <i>Head</i> — Short to medium in length, short in proportion to length of body .....	8
2. <i>Face</i> — Somewhat dished and wide between the eyes .....	8
3. <i>Jowl</i> — Medium in fullness .....	3
4. <i>Ears</i> — Small, fine, erect, and in old animals slightly pointing forward .....	5
5. <i>Neck</i> — Short and broad .....	3
6. <i>Shoulders</i> — Broad, full and deep .....	6
7. <i>Girth around heart</i> .....	8
8. <i>Back</i> — Long, broad and straight nearly to root of tail .....	10
9. <i>Side</i> — Deep and full, nearly straight on bottom line .....	7
10. <i>Flank</i> — Well back and low down, making flank girth nearly equal to heart girth .....	3
11. <i>Hams</i> — Broad and nearly straight with back, and running down well towards hock .....	10
12. <i>Legs</i> — Small and slim, set well apart, supporting body well on toes .....	10
13. <i>Tail</i> — Small, slim and tapering .....	3
14. <i>Hair</i> — Fine, medium in thickness and quantity .....	3
15. <i>Color</i> — White, and colored hairs to disqualify .....	2
16. <i>Skin</i> — Fine and pliable, small blue spots objectionable, but allowable .....	3
17. <i>Symmetry</i> — Animal well proportioned, handsome and stylish .....	8
<b>Total</b> .....	<b>100</b>

## THE LARGE ENGLISH YORKSHIRE

J. G. CURTIS, ROCHESTER, N. Y.

Farmers' Institute Lecturer

### HISTORY

The Large White breed of Great Britain is known in Canada and the United States as the Large Yorkshire, or Improved Large Yorkshire. The original Large White pig was extremely large and coarse, but the type has been considerably modified by selection, and possibly by the judicious use of other blood. Owing to the improvement effected in the breed, the term "improved" is commonly inserted in the name.

In the improvement of English breeds of swine, Chinese and Neapolitan swine were used quite extensively during the early part of the past century, the former, as the name indicates, coming from China and the latter from Italy. Both these breeds being small and fine-boned, and possessing a marked tendency to fatten, they were well adapted to modify the large, coarse-boned, late-maturing pigs which existed in Britain at that time.

Large Yorkshires occupy a prominent place in Great Britain, where they are regarded as the leading bacon-producing breed. In Denmark they are used exclusively for crossing on the sows common to the country, and the very finest bacon brought into England comes from this cross. They are more numerous in Canada than any other breed, and are being imported into the United States in large numbers.

At the present time there is no breed of hogs so widely distributed throughout the world as the Yorkshire, but as they were introduced into this country only a few years ago our farmers have not yet had much opportunity to observe or hear of the particular characteristics which have made the Yorkshires so popular in all other hog-growing countries.

The Yorkshire has been longer in evolution and represents a more highly developed organism than any other breed of hogs in the world. And, more important than this, we find that the breeders and improvers of the Yorkshire selected and bred their

stock along rational, natural lines. They at last obtained a special purpose animal, but in doing so they did not sacrifice either vigor, prolificacy, size or strength of bone. That the Yorkshire is a highly specialized breed must be apparent to all when we note that 84 per cent. of the carcass goes for fancy ham and bacon and that only 16 per cent. goes for lard, sausage and waste.

Although the Yorkshire traces back with much the same type for some four hundred years, the real origin of the modern Yorkshires dates back only about one hundred and fifty years. In England, the native country of the Yorkshire, they have always been raised on a diversified diet, getting great quantities of pasture, cured grasses, field roots, dairy by-products, nitrogenous grains, etc. This is the reason why they have attained and kept the bacon form and retained all of their original vigor and fecundity.

#### GENERAL DESCRIPTION AND CHARACTERISTICS

The Yorkshire is a large white hog with medium-sized head, medium to short nose, slightly dished; long, deep body of medium



FIG. 37.—TYPICAL YORKSHIRE SOW.

breadth and equally wide at shoulder, sides and hams; strong legs of medium length and good feet capable of carrying great weight.

They are very active and healthy and extremely prolific, frequently farrowing from twelve to fifteen pigs at first litter. Their disposition is kind and they are good mothers and usually large milkers with the ability to raise large uniform litters of strong growthy pigs, the kind that will continue to make rapid growth after being weaned whether you have milk to feed them or not. Several of my imported sows have sixteen teats each.

The Large Yorkshire is one of the largest breeds of swine. They vary considerably in type, and it requires skill in selection to breed them of uniform character. When intelligently selected they are profitable feeders, growing rapidly and becoming ready for market at an early age. They are well adapted to produce bacon for market, as they furnish a long side and a good proportion of lean to fat. They are reasonably hardy and very prolific. Being more than ordinarily prepotent, they are exceptionally valuable for crossing on the fatter types of hogs, giving to the progeny greater length and less tendency to excessive fatness.

#### UTILITY, BREEDING AND FEEDING QUALITIES

The value of any breed of hogs must finally be based on their utility; or, in other words, on their ability to make profits for the grower. This value depends upon their economy of production in the matter of both meat and progeny.

Profit in pork production is influenced to a greater extent by the number of pigs raised per litter than by any other factor. And this factor is largely in control of the hog raiser. It not only includes the selection of sows that will farrow and properly nurse large litters, but also includes proper care from the herdsman during the first few weeks of the pigs' life. The cost per pig at weaning time varies from about fourteen dollars for one pig per sow per year to less than two dollars for twenty-four pigs per sow per year. For breeding purposes the Yorkshire is of calm and quiet disposition; even at the critical period of farrowing time, the sows are, as a rule, quiet and easily handled. The boars are gentle and of good disposition. Both sexes are active, and take sufficient exercise to produce strong and healthy pigs. Because of the long years of pure breeding behind them the Yorkshires are very prepotent. This characteristic is especially

valuable to the farmer who is buying pure-bred boars to cross on common sows, as he is thus assured of a uniform, good-appearing crop of pigs.

Most important of all we find the Yorkshire sows to be exceptional mothers. The litters run from eight to sixteen pigs each. These litters would be of small value unless properly raised, but as the sows are gentle there is no difficulty, and since they have an abundance of milk they give the pigs a good start.

Yorkshire sows, being vigorous and active, rarely become clumsy even at an advanced age, hence they can be kept in the

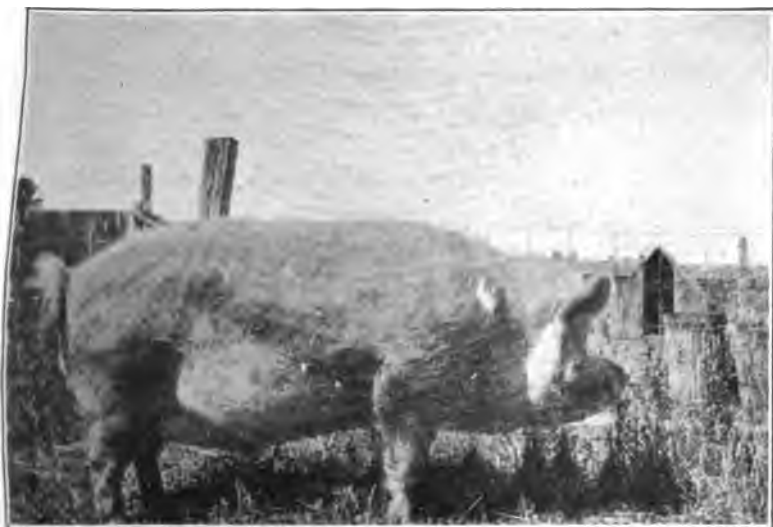


FIG. 38.—FOUR-YEAR-OLD YORKSHIRE BOAR.

brood herd until twelve or fifteen years of age. Hog growers now agree that the strongest, most growthy pigs and the largest litters are produced from aged sows.

To produce meat animals profitably, we must have animals active and vigorous to maintain a great appetite and with healthy digestive organs to assimilate the food eaten. Here we find the Yorkshire preeminent. They have, as a rule, a strong appetite which appreciates all kinds of feed and an inclination to get out and hustle for themselves.

Probably the most extensive experiments with breeds of swine in this country dealing with the matter of economy in pork pro-

duction have been conducted by the Iowa Experiment Station. In three experiments with the six leading breeds of swine, to determine which breed produced pork at the lowest cost, the Large Yorkshires were first in one experiment and second in the other two.

However, it is my belief that the economical production of pork is not so much a question of breed as it is a matter of individuality. The hog which has constitution and quality will make economical use of the food it consumes, no matter to what breed it belongs.

It is a noteworthy fact that wherever swine husbandry has achieved the greatest prominence throughout the world it has been very largely due to the introduction of Large Yorkshire blood by crossing Large Yorkshire boars on the native sows and thus securing a grade hog with the characteristic long, deep body, and the wonderful prolificacy and milk-giving properties of the Yorkshire, all of which are important factors in producing the most profitable hog. Notable examples are the cases of Canada and Denmark, where the improvement and placing of the swine industry upon a most profitable basis during the past quarter-century is largely accredited to the introduction and wide use of the Large English Yorkshire.

#### STANDARD OF EXCELLENCE

Standard of excellence and scale of points adopted by the American Yorkshire Club in 1899.

	Points
1. <i>General Outline</i> .—Long and deep in proportion to width, but not massive; slightly arched in the back, symmetrical and smooth, with body firmly supported by well-placed legs of medium length.....	5
2. <i>Outline of Head</i> .—Moderate in length and size, with lower jaw well sprung, and considerable dish toward snout, increasing with advanced maturity .....	4
3. <i>Forehead and Poll</i> .—Wide.....	1
4. <i>Eye</i> .—Medium size, clear and bright.....	1
5. <i>Jowl</i> .—Medium, not carried too far back toward neck, and not flabby.	1
6. <i>Snout</i> .—Turning upward with a short curve, increasing with age....	1
7. <i>Ear</i> .—Medium in size, standing well out from the head, of medium erection and inclining slightly forward.....	1
8. <i>Neck</i> .—Of medium length, fair width and depth, rising gradually from poll to withers, muscular, but not gross, evenly connecting head and body .....	3
9. <i>Outline of Body</i> .—Long, deep and of medium breadth, equally wide at shoulder, side and hams; top line slightly arched, under line straight .....	7

10. <i>Back</i> .—Moderately broad, even in width from end to end; strong in loin, short ribs of good length.....	10
11. <i>Shoulder</i> .—Large but not massive, not open above.....	6
12. <i>Arm and Thigh</i> .—Broad and of medium length and development.....	2
13. <i>Brisket</i> .—Wide and on a level with under line.....	3
14. <i>Side</i> .—Long, deep, straight and even from shoulder to hip.....	8
15. <i>Ribs</i> .—Well arched and deep.....	5
16. <i>Heart Girth and Flank Girth</i> .—Good, and about equal.....	8
17. <i>Hindquarters</i> .—Long, to correspond with shoulder and side, deep, with moderate and gradual droop to tail.....	5
18. <i>Ham</i> .—Large, well let down on thigh and twist and rear outline somewhat rounded .....	10
19. <i>Twist</i> .—Well down and meaty.....	10
20. <i>Tail</i> .—Medium, not much inclined to curl.....	1
21. <i>Legs</i> .—Medium in length, strong, not coarse, but standing straight and firm .....	5
22. <i>Hair</i> .—Abundant, long, of medium fineness, without any bristles....	4
23. <i>Skin</i> .—Smooth and white, without scales, but dark spots in the skin do not disqualify.....	2
24. <i>Color</i> .—White on every part.....	1
25. <i>Movement</i> .—Active, but not restless.....	5
Total .....	100

Secretary of the American Yorkshire Club,  
HARRY G. GRUM,  
*White Bear Lake, Minn.*

## THE SMALL YORKSHIRE\*

CHARLES S. PLUMB, COLUMBUS, OHIO.

Professor of Animal Husbandry, College of Agriculture of the Ohio State University

### ORIGIN



The origin of the Small Yorkshire pig, known as the "Small White" in England, is obscure. It has been assumed that it came from Chinese stock, though different today from the early Chinese type. Charles Mason of Chilton and Robert Colling of Darlington, Yorkshire, both Shorthorn cattle breeders, are the earliest known persons to have bred Small Yorkshires, then termed Chinese.

They owned herds as early as 1818, but nothing is known of the parent stock. Following this period the breed met with some extensive distribution in England by Shorthorn breeders.

### STRAINS OR FAMILIES

Some strains or families of Small Whites early developed in England. A local breed, known as the Solway in Cumberland, assisted in the improvement of the Small Yorkshire, although this was descended from the Mason-Colling breeding of Small Whites. The Solway also played a part in improving the Large Yorkshire as bred by Mr. Wainman of Carhead. There existed some twenty-five or so years ago, a small white pig known as the Suffolk, which was essentially absorbed by the Small Yorkshire. In Cumberland was another type, some larger than the Small Yorkshire, but of the same general character, the blood of the two being freely mixed. Still another branch, descended from Mason-Colling stock, was known as the Windsor breed. A more modern and very popular strain was developed by Lord Ducie, which

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\* Reprint from *Types and Breeds of Farm Animals*, by Professor Plumb, published by Ginn & Co., New York City.

really resulted from a judicious blending of Cumberland and Small Yorkshire blood.

#### INTRODUCTION TO AMERICA

The introduction of the Small Yorkshire pig to America under that name occurred many years ago. In 1888 Curtis wrote that it was first brought to this country about 1860, but did not attract much attention. Colonel Richard M. Hoe of New York and William H. Cole of New Jersey made importations in 1872, 1874, 1875, 1876, 1877, and 1878, and to these importations trace the best-known herds of America. Small Yorkshires were first exhibited at New York and New Jersey fairs in 1875,



FIG. 39.—SMALL YORKSHIRE SOW.

while in 1876 they were extensively shown in Ohio, Indiana, and at St. Louis and also at the Centennial Exposition at Philadelphia.

#### CHARACTERISTICS

The characteristics of the Small Yorkshire are most striking. This breed among swine is the most highly developed of any from the standpoint of "fancy" points. The *head* in its most fashionable form presents a remarkable development. The *face* is very short and broad, and is dished or curved to such a degree in specimens as to point the end of the nose upward. The lower

jaw also is curved upward in a marked degree. In this highly dished face the eyes are often obscured by rolls of fat about the side of the head. The *ears* are short, fine and erect, pointing forward. The *jowl* is naturally very round and highly developed. This breed is famous for great fat production; the *neck* short and thick, the *back* very broad, short, and deeply laid with fat or flesh, the tail set up well on a line with the back, the hams and shoulders heavy and full for the size, and the bones, hair, and quality quite refined. The *color* is entirely white except for black spots occasionally occurring on the skin. In referring to the characteristics of the breed Professor James Long writes:

In breeding the Small White pig the breeder should make it his aim to maintain the characteristic points of the variety, the chief of which are form (*much in little*), fineness of bone, quantity and quality of hair, shortness of snout, and aptitude to fatten.

As a whole pigs of this breed have great breadth and depth for their size.

#### SIZE

The size of the Small Yorkshire ranks it as the smallest of the breeds kept in this country. The matured pig will usually weigh from 180 to 200 pounds, although Mr. Sanders Spencer has had them weigh nearly 300 pounds at fifteen months of age. Owing to the very compact form individuals weigh more than might be anticipated.

The early-maturing qualities of the Small Yorkshires are of a high order, so that the pigs may be fattened at almost any stage of development.

#### FEEDING

The Small Yorkshire as a feeder is easily fattened, but does not make large gains. This has been regarded as a superior sort for making small roasting pigs as the young things finish off early for this purpose. Some British swine authorities claim that pigs of this breed can be brought to excessive fatness on less food by half than any other breed. It will not, however, increase as rapidly in actual gains as the larger breeds. At the Vermont Experiment Station Small Yorkshires made an average daily gain of 1.04 pounds live weight, having an average weight of 201 pounds after 184 days of feeding, starting at 23 pounds. It required 353 pounds of feed for 100 pounds gain, and the carcasses

dressed 84.1 per cent. This record somewhat excelled that of the Berkshire.

The Small Yorkshire as a grazing pig will do extremely well, at least that is the experience in England. Professor Long states that when a Small White pig is fit for exhibition it gets very little but grass, and that he has repeatedly seen fat pigs of this breed which in summer were entirely grass-fed.



FIG. 40.— PRIZE-WINNING SMALL YORKSHIRE BOAR.

#### QUALITY OF MEAT

The quality of Small Yorkshire meat, while of fine grain and sweet, is not in favor today in Great Britain, containing as it does a high percentage of fat. Mr. John Walker, writing in 1905 in *Pigs for Profit*, says:

As far as quality goes these pigs are despised by the butcher because they give such a very small proportion of lean to fat that the public leaves the joints of pork on the butcher's slab, it being so leanless, while the bacon curer will have naught to do with the fat little animals.

The cross-bred or grade Small Yorkshire pig is in general an improvement over the pure-bred, if mated to a larger breed, for thereby a better grade of pork is produced and a more hardy and prolific stock results.

#### FECUNDITY

The fecundity of the Small Yorkshire is about medium, with a tendency to small litters, such as might be expected from a breed

tending to excess of fat development. The nursing females produce but a moderate amount of milk.

#### POPULARITY

The popularity of the Small Yorkshire has decreased to such an extent that it is but slightly bred today in England or America. As a breed it was largely developed by fanciers, often for show. Its excessive fat, however, caused it to become unpopular in the British market, where a lean type of bacon is most in favor. According to Volume XX of the National Pig Breeders' Association of Great Britain, only two or three breeders now enter their pigs while of the Large Whites there are entered 1,000 out of 1,391. This does not speak well for the popularity of the Small Yorkshire in England. In the United States the breed is very rarely seen at the live-stock shows, nor are there many breeders.

#### DISTRIBUTION

The distribution of the Small Yorkshire is mainly in England and the United States, in small herds and in a limited degree, as has been indicated. They are mainly located in the eastern United States, notably in New York, Massachusetts and Pennsylvania, with a few small herds in the middle West.

#### ORGANIZATIONS

Organizations to protect and register Small Yorkshires exist in England and America. The National Pig Breeders' Association registers in Great Britain. In the United States the American Small Yorkshire Club was organized in New York in 1878. This club has registered about 1,500 pigs in the first two and only volumes of the herdbook issued. The American Yorkshire Club organized in 1893, with headquarters in Minnesota, also registers this breed in the *American Yorkshire Record*, of which two volumes have been published. In the herdbooks of this club the Small Yorkshires are registered in a group by themselves, as Class A, the Large Yorkshires being in Class B. Only a few hundred of the Small Yorkshires have been registered in this club, these being mainly in the western states.

## THE VICTORIA\*

CHARLES S. PLUMB, COLUMBUS, OHIO

Professor of Animal Husbandry, College of Agriculture of the Ohio State University

### ORIGIN

The origin of the Victoria breed of pigs is accredited to two sources, which are as follows:

1. *The Davis Victoria Pig*.—George F. Davis, of Dyer, Lake county, Indiana, combined the blood of the Poland-China, Berkshire, Chester White and Suffolk, crossing these and then practicing careful selection to secure a definite type. This work began about 1870. The descendants of this breeding represent the present-day Victorias in this country.

2. *The Curtis Victoria pig* originated with Colonel F. D. Curtis, of Kirby Homestead, Saratoga county, New York, about 1850.



FIG. 41.— GROUP OF PRIZE-WINNING VICTORIAS.

The native hog containing a strain of the Irish Grazier and the Byfield breed were first used, and their descendants were crossed on the Yorkshire. What was termed Suffolk blood was also used, but this was probably the Yorkshire or a close relative. Careful selection by Colonel Curtis, who was a prominent stockman in his day, resulted in the development of a white breed much after the Middle Yorkshire type, with slightly dished face and erect

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\* Reprint from *Types and Breeds of Farm Animals*, by Professor Plumb, published by Ginn & Co., New York City.

ear. The Swine Breeders' Convention at Indianapolis in 1872 approved of a committee report commending the Victoria. In this it was stated that pigs of this breed if pure should have a direct descent from a sow named Queen Victoria, which may be regarded as the mother of the family and from which the breed probably takes its name. So far as the writer is aware the Victoria stock of Curtis ancestry is now no longer in pure bred existence.

#### CHARACTERISTICS

The *head* is moderately broad, the *face* has a medium dish, the *ear* is of small to medium size and is carried very erect. The *body* is broad and deep, the *back* level, and the *tail* set on at a line nearly with the level of the back. The *shoulders* and *hams* carry a considerable thickness and fullness, and the length and depth of side meat is very good. The length of leg is only moderate, and the quality of bone and hair is fair. In general conformation one is reminded of the Middle White of England.



FIG. 42.—VICTORIA SOW.

#### SIZE

The size of the Victoria places it in the medium group with the Poland-China and Berkshire. At maturity the sow should weigh 450 pounds and the boars 600. The average weights for Victorias shown at the American Fat Stock shows at Chicago from 1878 to 1881 inclusive were 460½ pounds for sows one year and under two, 331 pounds for sows under one year, and 326 pounds for barrows between six months and one year old.

## ADAPTABILITY

The adaptability of the Victoria is to the middle West where good pasture is provided and plenty of grain always available for finishing.

## FEEDING QUALITIES

The Victoria as a feeder has not been extensively tried. Mr. Davis, the originator, fed and showed these pigs with much success for many years, beginning with local fairs in Indiana and Illinois in 1878. From observations by the writer, however, no special advantage seems to exist in the pigs of this breed as feeders. In fact it may be questioned if the Victoria will feed equal to the standard, popular breeds of the present day.

## QUALITY OF PORK

The quality of Victoria pork will rank well among other breeds. At the American Fat Stock Show at Chicago, the breed has killed out well in the carcass tests. In 1882 at this show the prizes for the best carcasses of swine were awarded on Victorias exhibited by Scheidt & Davis of Indiana.

## CROSSBREEDS

The crossbred or grade Victoria pig is not well tried in the American feed yard and its value is not commonly known. The breed is not yet well suited to crossing with pure-breds, owing to its own comparatively recent origin, but the grade should sell satisfactorily on the market.

## BREEDING QUALITIES

The breeding qualities of the Victoria are very good and they produce fair-sized litters, in fact the claim is made that large litters are common.

A special argument in behalf of the Victoria has been that as a white breed it is not so susceptible to skin disease such as sunburn, mange, itch, etc., as are other white breeds, especially in the South and Southwest.

## PROMOTION AND DISTRIBUTION

The promotion of the Victoria pig is championed by the Victoria Swine Breeders' Association, organized in Indiana in 1886. In 1887 the first volume of the *Victoria Swine Record* was issued containing 103 registrations.

The distribution of the Victoria pig is mainly in Indiana, Ohio and Illinois, though herds also exist in various other Mississippi Valley states in a small way. The breed is not growing rapidly in public favor and is shown but little at live-stock shows and agricultural fairs.

## THE SUFFOLK\*

CHARLES S. PLUMB, COLUMBUS, OHIO

Professor of Animal Husbandry, College of Agriculture of the Ohio State University

Two so-called breeds exist under this name, one in America, the other in England. The American breed is white, the English black. At one time a type of small white pigs existed in England under the name of Suffolk, but it finally became absorbed with the Small Yorkshire, and today no such breed as a White Suffolk is recognized abroad.

The English Suffolk pig is black, and, as will be seen in the discussion of the Essex pig, this is known abroad as the Small Black breed, although the names Essex or Suffolk are appropriate and are used to a certain extent.

### ORIGIN

The origin of the American Suffolk pig is no doubt of Small Yorkshire ancestry in England. This breed is said to have been imported to the United States in 1855 by John Wentworth of Illinois. The breed has never had much development in America, and so little impression has it made under the name of Suffolk that, although an association was years ago organized in its behalf, the American Suffolk is not recognized in the October, 1904, list of accredited swine-record associations of the United States Department of Agriculture.

### CHARACTERISTICS

In 1872 the National Swine Breeders' Convention at Indianapolis, Indiana, approved of the following description of the breed, which is republished here as more specific than the published standard of the American Suffolk Swine Breeders' Association.

Head small, very short; cheeks prominent and full; face dished; snout small and very short; jowl fine; ears short, small, thin, upright, soft, and

\* Reprint from *Types and Breeds of Farm Animals*, by Professor Plumb, published by Ginn & Co., New York City.

silky; neck very short and thick, the head appearing almost as if set on front of shoulders, no arching of crest; chest wide and deep; elbows standing out; brisket wide but not deep; shoulders thick, rather upright, rounding outward from top to elbow; crops wide and full, long ribs, well arched out from back, good length between shoulders and hams; flanks well filled out and coming well down at ham; back broad, level, straight from crest to tail, no falling off or down at tail; hams wide and full, well rounded out; twist very wide and full all the way down; legs small and very short, standing wide apart — in sows, just keeping belly from the ground; bone fine, feet small, hoofs rather spreading; tail small, long, and tapering; skin thin, of a pinkish shade, free from color; hair fine and silky, not too thick; color of hair pale yellowish white, perfectly free from any spots or other color, size small to medium.

The American Suffolk pig in a breed comparison is essentially a Small Yorkshire, although the dish of face may not be always quite so pronounced as with the latter, while the size tends to be slightly larger. Otherwise the two breeds are one to all intents and purposes.

#### DISTRIBUTION

The distribution of the American Suffolk pig is mainly in the Mississippi valley, small herds being kept in Michigan, Iowa, Illinois and Indiana. Several hundred have been registered in Canada. Between one and two thousand American Suffolks have been registered, but thus far no herdbook of the breed has been published.

## THE DUROC-JERSEY

R. J. EVANS, CHICAGO, ILL.

Secretary of the American Duroc-Jersey Swine Breeders' Association

The foundation stock came from many sources and none were accepted without an affidavit that there were pure-bred Duroc-Jerseys for many generations back. When the National Association was started their board opened up the foundation stock again but most of the early records of the National Association trace directly to the first volumes of the American Association. Wisconsin, Iowa, Illinois and Ohio contributed the major portion of the first records in Volume I.

The American association was formed in about 1883 and was the first association formed for recording the Duroc-Jersey. In 1891 the National was formed by a few breeders of the West who were dissatisfied with the manner in which the board of directors were governing the American. In recent years both associations have taken steps to recognize the other's records — that is, each accepts the numbers of the other, and animals recorded in one are eligible in the other without again recording the sires and dams.

From the standpoint of adaptability the Duroc has proven his value as a producer of cheap pork in every corner of the United States and Canada where pork is grown. As a follower of feeding cattle, as a grazer in Southern and Coast forage lots, he has surpassed all other breeds in amount of pork returned for feed and time consumed, and is rapidly increasing in numbers in places not considered practical for raising pork. Outside of what is commonly known as "the hog belt," he has outstripped his competitors in numbers, because of this adaptability to all conditions.

High priced land makes it imperative that pork growing be done on the most economical basis possible, and it is financial suicide to produce pork from inferior breeds, or from breeds which do not readily adapt themselves to varied conditions.

## DEVELOPED BY PRACTICAL MAN

The Duroc has been developed through three-quarters of a century of careful consideration of the qualifications necessary for the best machine to convert grain and grass into pork. He has been developed for the most part by men who had to make a living from pork growing, and the ideal in mind all the way up the line has been the best possible money-making hog. By selecting such a breed you are from the outset assured of success if a reasonable amount of common sense and care are used in breeding and feeding.

The development of a breed of live stock must needs be in a great portion the work of a comparatively few men, who have an ideal and map out the course to be pursued to reach as nearly as possible to that point of excellence. These few men often sacrifice time, money and friends. It is more than a life's work; it is a work that is never complete. The fact that the ideal is never quite attained makes the work all the more attractive to the constructive breeder.

The preliminary work of improving the Duroc fell to a few men who realized the need of a more nearly perfect pork-producing animal in the grain and grass belts of the United States, but the work well begun by the few has been carried on by the many, who were quick to note the utility of the breed and the possibilities that its growing popularity presented.

## GROWTH IN POPULARITY

To know how rapidly he has come into his own one needs only to look over the records of shows, sales, registry associations and note the percentage of Durocs that come to the market centers of the nation. At the leading shows in state and national fairs, with but few exceptions, the Duroc outnumbers other breeds, many of them older in point of history than ours. The record associations during the past ten years recorded 272,000 breeding animals. More than ten times as many as were recorded in the previous twenty years. Reports in farm and live stock publications will convince the most skeptical that there are 100 per cent. more sales of Durocs than of any other breed. Reliable information places the per cent. of Durocs and hogs in which the Duroc blood pre-



FIG. 43.—DUROC-JERSEY SOW, NEW YORK STATE FAIR, 1913.

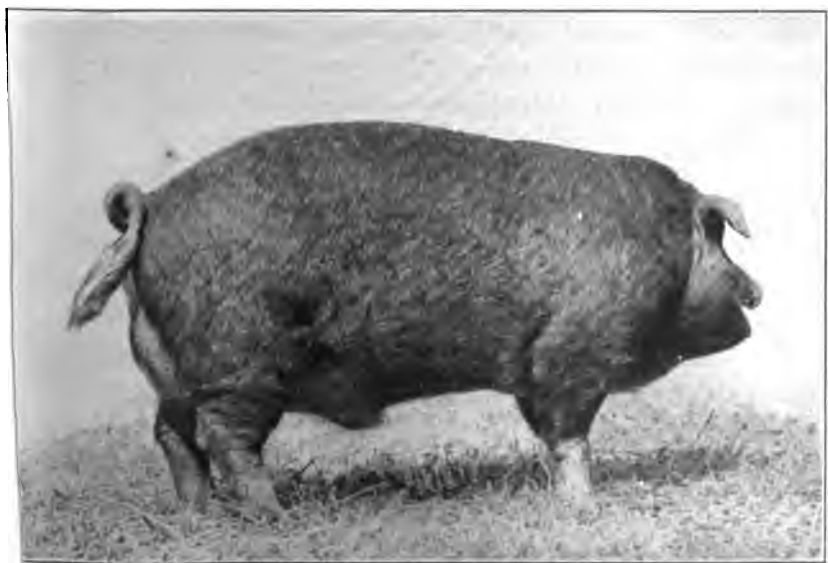


FIG. 44.—DUROC-JERSEY BOAR, NEW YORK STATE FAIR, 1913.

dominates as nearly 75 per cent of the entire number of hogs of all breeds marketed.

#### ALL CHARACTERISTICS ARE USEFUL

Everything regarded as useless and of little or no cash value, has been eliminated from the Duroc, except the squeal. There are no stripes, no white points, no particularly marked features over which the breeders and fanciers may haggle. Every point which the intelligent breeder and buyer of Durocs insists on being a part and characteristic of the animal he buys, or uses for breeding purposes, are of value to a pork-making animal of the highest order; good feet, short pasterns, large bone; all necessary for carrying a large carcass to market or to produce and carry to farrowing time a large litter; high arched back for the same reasons; good smooth coat, showing easy feeding quality; large heart girth, showing the wonderful constitution, one of the strongest points of the breed; good wide head, showing nerve force and feeding type; ears not too large, and a good eye, necessary in rustling in the feed lots and on grass; good spring of rib, showing roomy interior for the development of the organs which convert the grain and grass into something that brings money at the market. Possibly our competitors consider the cherry color a useless color, but it surpasses in beauty any other color of hair a hog ever has grown, and there is in the makeup of the red hog a pre-disposition to produce more strong pigs than the sires of other breeds. There is no thing, then, that counts for more money than this same cherry red, for it is the extra pigs a farmer or breeder raises from the litters that make the extra profits.

#### POUNDS VS. MARKET TOP

We often hear a great deal of market toppers from the exploiters of other breeds. Judged purely from the packers' standpoint, the breed has not taken a topnotch place, but a cold-fact, statistical presentation of the results of market topping will convince the most skeptical that there is little value in it from the side of the feeder and grower. Market toppers do not pay the most mortgages. The average weight of hogs reaching the markets today is 230 pounds. A five cent top will give the seller \$1.15

per head, quite a considerable amount, you say, on a carload. Granted; but if this "finish" has been put on at a sacrifice, many times the \$1.15 per head has been lost in the last two months of the feeding operations. Go into the feed lots of the feeders throughout the country and you will get the evidence and be convinced that the Duroc answers the purpose of a market hog better than any breed known today. That is sufficient reason for this rapid growth in popularity. The ultimate end of the hog is the market and the pork barrel, but the markets as we find them today do not reimburse a man for bringing to the market the hog that the packer calls a "market topper." The "engine" in the hog, the machine that converts grain and grass into pork and lard, becomes offal at the abattoir. The larger and more powerful the "engine," the more offal, but the larger "engine" converts these elements into marketable products in greater quantities. The hog that carries the most powerful digestive organs is the hog that develops the quickest and makes the surest profits. No pure breed of hogs can measure up to the Duroc from this standpoint.

#### MORE POUNDS FOR SAME FEED

We give below only one of a number of experiment station tests on feeding. This is from the Michigan station. The test lasted 168 days. During that time the Durocs gained 2.59 pounds per day at a cost of 4.65 pounds of grain for each pound of gain. Their nearest competitors gained 2.11 pounds per day at a cost per pound of 5.22 pounds of feed for each pound of gain.

#### EVIDENCE FROM THE BREEDERS

The following excerpts are from articles written by breeders who have raised Durocs from five to twenty years. Many of them have been breeders of other breeds before taking up the Duroc.

*Ohio.*—"I find the Duroc breeds younger, farrows easier, has larger litters, fewer runts, and grows faster and gives better account for feed consumed."

*Montana.*—"Experience proves that he will ship farther and sustain less shrinkage than any marketable hog."

*Missouri.*—"My Durocs for years have averaged eight raised to litter, young gilts and old sows included."

*Kansas.*—“On account of their being so active, cattle feeders use them in their feed lots in preference to other breeds.”

*Missouri.*—“Have fed Durocs and —— of same age and same feed and the Durocs outweighed the others fifteen to twenty pounds when sold.”

*Kentucky.*—“As feeders no breed can surpass them. Such is my conviction after twenty years of experience and observation in the feed lot. I had a 700-pound sow farrow 7 pigs and raise 6. At two months of age they averaged 55 pounds; at three months they averaged 102; at four months they averaged 150½ pounds, and at five months they averaged 200 1/6 pounds, the heaviest 221.”

*Kansas.*—“Have raised hogs twenty years and have tried several breeds and I think the Duroc comes the nearest to filling the pork barrel demand than any other breed and we must all figure from the pork barrel end.”

*Ohio.*—“In April, 1912, I had one 2-year-old sow and four gilts farrow and raise 44 pigs. In February the same sows farrowed 63 and raised 43, and August, 1913, they farrowed 60 and raised 40. The extreme cold of February and the extreme heat of August caused an extra loss in these litters, but the average is still higher than any other breed of sows could have made.”

*Kentucky.*—“Durocs are noted for constitutional vigor. Their great heart girth is indicative of this. Some breeds may have heavier hams, but the Duroc has a good ham and the constitution besides. The constitution of a hog is not in its ham.”

*Iowa.*—“Constitutional strength permits an animal to assimilate large quantities of feed into remarkable gains in flesh within a short period of time. It also tends to ward off disease. Duroc pigs have this constitutional vigor in a marked degree.”

*North Carolina.*—“After feeding the red steer two years he is sold and passes into history, bringing less than one-third of the coin the old red sow has cashed in during the same period, and the red sow stays ‘on the job’.”

*Illinois.*—“They are hardier at farrowing time and will rustle for the teat on a cold night and survive where others lay around and chill to death.”

*Illinois.*—“There are more outstanding individual specimens of the breed, more uniformity of breeding and therefore a larger percentage of good animals to be found among Durocs. The position the breed holds in the public eye enables the breeder to dispose of his surplus stock.”

*Indiana.*—“The Duroc among hogs is what the Anglo-Saxon is among men — a conqueror. He needs no one to champion his cause. Wherever he goes he makes friends. He stands a living monument to the ability and faith of the men who have developed the breed.”



FIG. 45.—DUROC-JERSEY SOW AND PIGS. OWNED BY C. E. BARNES, OXFORD, N. Y.

Many other experiences of the hundreds of those breeding Durocs could be added if the evidence were needed, but the fact that there are thousands of herds now where there was one ten years ago is far more convincing testimony than any that could be given by the individual breeder.

#### REVISED SCORE CARD

Head . . . . .	4	Ears . . . . .	2
Eyes . . . . .	2	Neck . . . . .	2

Jowl . . . . .	2	Coat . . . . .	3
Shoulder . . . . .	6	Color . . . . .	2
Chest . . . . .	12	Size . . . . .	8
Back and Loin . . . . .	14	Action and Style . . . . .	3
Sides and Ribs . . . . .	9	Condition . . . . .	2
Belly and Flank . . . . .	4	Disposition . . . . .	2
Ham and Rump . . . . .	10	Symmetry of Points . . . . .	3
Feet and Legs . . . . .	9		
Tail . . . . .	1	Total . . . . .	100

## THE TAMWORTH, THE IDEAL BACON HOG

E. N. BALL, HAMBURG, MICH.

Secretary of the American Tamworth Swine Record Association

The Tamworth is one of the oldest of the improved breeds of swine. It was introduced into England about 1812 by Sir Robert Peel, and was brought from Ireland while he was Secretary for that country to the Crown.

Sir Robert was much interested in farming, and up to 1850, the time of his death, kept this, his favorite breed of hogs. From that time on it was called Tamworth—the name of the locality in which the farm was located.

In later years it was introduced into Canada, and has since become one of the most popular breeds of the Dominion. Something like twenty-five or more years ago the Tamworth was introduced into the United States. His popularity has been of somewhat slow growth, owing mostly to his appearance.

For decades preceding the introduction of bacon hogs, the American people had become fixed admirers of the lard types with their rather short, thick, plump, smooth bodies and short heads, necks and limbs. As the Tamworth conformation inclined to the very opposite type, the wide divergence from appearance standpoint has undoubtedly militated against them, even in the face of logical reasoning from an economic standpoint. The Tamworth, contrary to the opinion of some, is a docile, tractable animal, responding as all animals do to the character of the treatment accorded them. It is possessed in an unexcelled degree of the qualities of good motherhood, including ease of conception, large litters, abundant milk supply and attentiveness to the young. It is particularly well adapted for purposes of cross-breeding in the production of intermediate types.

But the leading feature of the Tamworth, its “long suite” so to speak, is its adaptability for the manufacture of the famous Wilshire hams of England and Virginia smoked hams of the United States, and the very best and highest quality of breakfast-bacon on the globe.



FIG. 46.—TAMWORTH SOW.

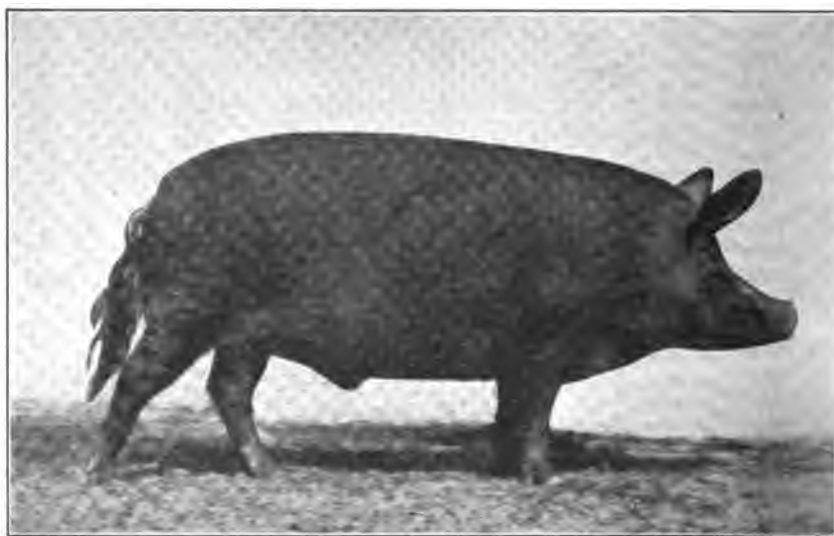


FIG. 47.—TAMWORTH BOAR.

There is a constantly increasing demand for both fresh and cured pork with less fat than that furnished during the past. Mankind has been relieved to a large extent of the severe manual labor to which it was subjected a half century ago. Improved machinery has in marked degree replaced muscular effort, man becoming the operator of the machine, thereby requiring less energy-producing factors in his diet. The demand for choice bacon on the part of an epicurean constituency has been constantly increasing; this demand cannot be met by products of the lard type hogs, the bacon sorts only yielding a maximum quantity of best quality. The demand for the extremely fat type of hog does not exist today as it did some years ago; the animal fats are being replaced to a notable extent by vegetable and mineral oils for purposes of illumination, lubrication and domestic uses.

The Tamworth is preeminently a bacon hog. The dressed carcass may be cut up on the local dealer's block and retailed with little or no trimming or waste, involving labor and expense in converting the by-products into marketable goods. The Tamworth produces a maximum amount of bacon from its long, lean, deep sides which are not unduly covered with fat. The hams and shoulders, lighter than those of the lard types, being devoid of an excess of fat, meet with great favor on the market. The head which is long and lean, does not furnish an excess of jowl meat unpleasant to the palate of the discriminating consumer.

From the standpoint of economic production there are no reliable data on record to prove that it costs more to produce a given weight with bacon than lard type hogs. A number of comparative tests of this kind have been made by several institutions, but the results considered collectively do not provide positive proof either one way or the other. It is true that lard type hogs attain a greater degree of fatness at an early age, being earlier in maturing, but the greater length of body and growthiness of the bacon types enable them to acquire equally as large weights at the same age.

The American Tamworth Swine Record Association was organized in 1897. The membership approximates 200. The Association has published five books of record. There are approximately 15,000 animals recorded. The breed is fast growing in favor, and where once introduced holds its own with other breeds.

## STANDARD OF EXCELLENCE

The following is the standard of Tamworths as adopted by the National Pig Breeders' Association of Great Britain and the American Tamworth Association.

1. *Color*.—Golden red hair on a flesh-colored skin free from black.
2. *Head*.—Fairly long, snout moderately long and quite straight, face slightly dished, wide between ears.
3. *Ears*.—Rather large, with fine fringe, carried rigid and inclined slightly forward.
4. *Neck*.—Fairly long and muscular, especially in boar.
5. *Chest*.—Wide and deep.
6. *Shoulders*.—Fine, slanting and well set.
7. *Legs*.—Strong and shapely, with plenty of bone and set well outside body.
8. *Pasterns*.—Strong and sloping.
9. *Feet*.—Strong, and of fair size.
10. *Back*.—Long and straight.
11. *Loin*.—Strong and broad.
12. *Tail*.—Set on high and well tasselled.
13. *Sides*.—Long and deep.
14. *Ribs*.—Well sprung and extending well up to flank.
15. *Belly*.—Deep, with straight under line.
16. *Flank*.—Full and well let down.
17. *Quarters*.—Long, wide, and straight from hip to tail.
18. *Hams*.—Broad and full, well let down to hocks.
19. *Coat*.—Abundant, long, straight and fine.
20. *Action*.—Firm and free.
21. *Objections*.—Black hair, very light or ginger hair, curly coat, coarse mane, black spots on skin, slouch or drooping ears, short or turned-up snout, heavy shoulders, wrinkled skin, inbent knees, hollowness at back of shoulders.

## THE THIN RIND OR HAMPSHIRE.\*

CHARLES S. PLUMB, COLUMBUS, OHIO

Professor of Animal Husbandry, College of Agriculture of Ohio State University

This breed has been known for many years in the United States under the name of Thin Rind. In 1904, by official action of the American Thin Rind Record Association, this name was changed to Hampshire. The name Hampshire seems ill-advised to the writer, for the reason that quite a different breed of pigs exists at present under that name in England. It is unfortunate to have the same name for two different breeds of swine, and is not justifiable. Therefore the author will make use of the word Thin Rind, which is said to have been given on account of the mellow thin skin and soft silky hair.

### ORIGIN

The origin of the Thin Rind breed of swine is quite obscure. Mr. H. F. Work states that this pig was a native of Hampshire, England, early in the last century. About 1820 to 1825 a retired sea captain named MacKay, living near Boston, Massachusetts, is said to have brought some of these pigs in England and taken them to Massachusetts, where they became popular under his name and later became known as Thin Rinds. This breed has long been known in Kentucky as the Thin Rind, and it has been assumed that it came from the same source as the MacKay pig. In 1835 Major Joel Garnett is said to have introduced Thin Rinds to Kentucky, having purchased from eastern persons. Some have claimed also that the ancestors of the Kentucky Thin Rind were imported prior to 1842 from Tonquin, China, by a merchant of New Orleans. The author has been unable to secure any absolute information regarding the true ancestry of this pig. No description of any breed has been found in the early English writings which will apply to the Thin Rind of 1835.

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\* Reprint from *Types and Breeds of Farm Animals*, by Professor Plumb, published by Ginn & Co., New York City.

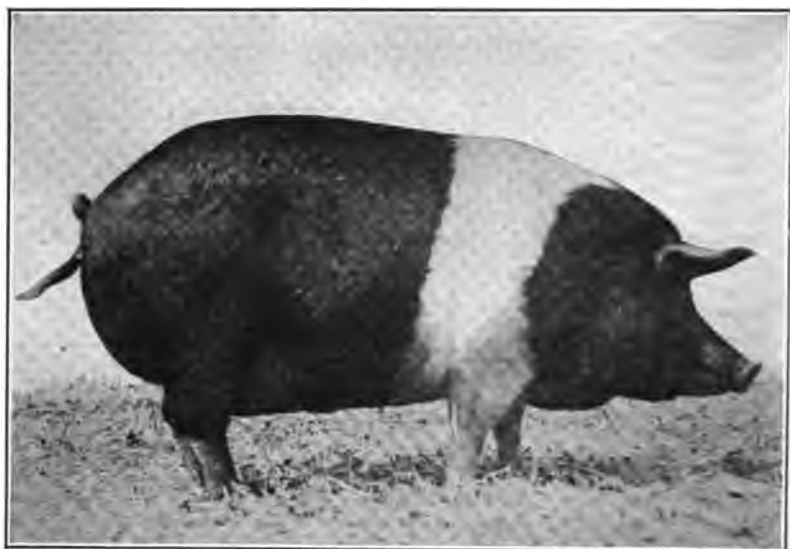


FIG. 48.— HAMPSHIRE SOW, NEW YORK STATE FAIR, 1913.



FIG. 49.— HAMPSHIRE BOAR, NEW YORK STATE FAIR, 1913.

## CHARACTERISTICS

The *head* is of the straight-faced type, of medium size, with light jowl. The *ears*, though erect, incline slightly forward. The *back* tends to be of only medium width, not thick, and is fairly well supported. The *shoulders* are light and well set in, and have fair width. The *body* as a whole has only moderate depth and length, producing a fair side for bacon. The *hams* are lacking in fullness, not possessing the thickness and depth of the more popular American breeds. The *legs* tend to be somewhat long, but the bone is of good quality, while the pasterns and toes are usually well placed. The *color* of the Thin Rind is usually black, with a white belt about the body, this being known as a "listed" color, or solid black. This white band or list is from four to twelve inches wide, encircling the body just back of and about the fore legs, the latter also being usually white. In discussing the color Mr. H. F. Work says:

While the list will long be retained by many of the breeders as the most fashionable color, there are also those who try to run their herds pure black. An ideal color is made up much as one may fancy, and the "color craze" should not exclude worthy animals that are a little "off color," save where spots occur. The breeding of blacks is an absolute necessity when the listed hogs begin to show too much white, so as to narrow the belt.

## SIZE

The size of the Thin Rind pig does not place it among the largest breeds, it being about medium in size. Boars sometimes attain weights of 500 pounds, but usually are much smaller. The sows weigh about 300 pounds in ordinary condition. Barrows in high flesh attain a weight of 300 to 400 pounds. At the 1903 International Live Stock Exposition John Goodwine, Jr., won first prize for barrows with five Thin Rinds which averaged 493 pounds each at eighteen months old, one of which won the championship in the slaughter test.

## FECUNDITY

The fecundity of the Thin Rind pig is of superior character. The sows usually farrow litters of ten or twelve pigs after the first farrowing and make excellent mothers and nurses. In this respect they rank with the most prolific breeds of American ancestry.

#### CROSSBREEDS

Grade or crossbred Thin Rind pigs are not common. The use of the pure-bred boar on common sows will result in a more prolific stock, leaning toward the bacon type. Superior Thin Rind boars should add vigor and killing quality to the offspring of a certain class of high-fleshed sows of chunky type.

#### GRAZING

The Thin Rind as a grazer ranks high in Kentucky and elsewhere, where pigs range more or less for mast, and seek for feed in field and forest. It was this quality, together with that of fecundity, which added to the popularity of the breed where known.

#### MEAT

The quality of Thin Rind meat is distinctly superior. Naturally the breed belongs to the bacon class, but when persistently fed corn for generations it loses some of its bacon-producing character. Yet in the slaughter test these pigs have made a good showing. At the 1901 International Live Stock Exposition at Chicago the second prize for both pens of five barrows of export bacon type, and for carcass weighing 300 pounds or over, was awarded Thin Rind barrows exhibited by Mr. Goodwine of Illinois. At the 1905 International Mr. E. C. Stone won the grand championship in barrow class over all breeds. Thin Rind meat is of excellent grain with a desirable proportion of lean to fat.

#### ORGANIZATION

An organization to promote Thin Rind interests was incorporated by six Broome County, Kentucky, farmers in 1893, they forming the American Thin Rind Record Association. At this time about twelve herds of swine of this breed were eligible for registration, mainly located in Kentucky and Indiana. In 1904 this association changed its name to the American Hampshire Swine Record Association. No herdbook has yet been published. The Secretary of the Association is E. C. Stone, Peoria, Ill.

#### DISTRIBUTION

The distribution of the Thin Rind Breed is not extensive. It has long been bred and fed in Kentucky, and herds in a small way have been kept in Indiana and Illinois. The popularity of this breed is restricted but has gained somewhat in recent years.

## THE MULE-FOOT

J. N. McPHERSON, SCOTTSVILLE, N. Y.

### ORIGIN



The origin of the Mule-Foot Hog is not certainly known, but there is no doubt it is a very ancient breed. Aristotle, the Greek philosopher, described them in his books more than 2260 years ago. Various other writers have mentioned them from time to time in different parts of the world. It is known that the first split-hoofed swine came from Asia, and from these were developed the well-known modern breeds within recent times. It is believed that the Mule-Foot hog came from Africa, and was carried to other countries many years ago. It is certain that it is not a freak or sport, and has not been produced by any kind of cross-breeding with other species.

It was brought to America, probably from Europe or Africa at an uncertain date, then drifted westward through Pennsylvania, Ohio, Kentucky, Indiana, Illinois and Missouri, before the Civil War.

The National Mule-Foot Hog Record Association was organized in Indianapolis, Indiana, January, 1908. Since that date they have been widely advertised in farm papers and exhibited at the leading fairs, and are now a leading breed in many parts of the country, giving entire satisfaction wherever given a fair trial.

### DESCRIPTION AND CHARACTERISTICS

The Mule-Foot hog is black in color, healthy, vigorous, good natured and quiet, the easiest hog to handle and drive, by far, of any we ever saw. The sows are careful mothers, heavy milkers, and raise large litters of pigs.

The pigs are strong and active at birth and do not require so much care and attention as most other breeds. They can be

fattened at any age, and are easy keepers and always plump if given half a chance. They are a large breed, sows weighing 400 to 600 pounds at maturity. Their meat is of the best flavor and quality. They dress very high, net weight, and sell at top prices



FIG. 50.— MULE-FOOT SOW.

to butchers and packers. They grow rapidly and will outweigh common kinds when given the same chance. Their long deep bodies make them weigh heavier than they look. They are good foragers and will make the first 200 pounds at a very low cost.



FIG. 51.— MULE-FOOT BOAR.

The young sows usually farrow from five to ten pigs the first litter. The older ones eight to twelve and often more. They farrow as many as they ought and usually raise them all. In cross-breeding, they show the characteristics of the Mule-Foot breed to a marked degree. Half-breeds usually have the solid hoof, solid color and kind disposition. The foot is neat, solid, short and

rather small, but strong. They stand up well on the toe and do not break down and become crippled by heavy feeding. The two small toes (dew claws) are a little larger and nearer the ground than in other breeds.

#### DETAILED DESCRIPTION

1. *Head and Face* — Head medium length. Face broad between eyes, nearly straight, cheeks full, surface even and regular.

Objections — Head large, coarse, crooked or much dished.

2. *Eyes* — Bright and lively, free from wrinkles or fat surroundings.

Objections — Small, deep or obscure, or vision impaired by fat or other causes.

3. *Ears* — Medium length, thin, tipped slightly inclined outward and forward, knuck small and well set to the head.

Objections — Large, coarse, thick, large or long knuck, drooping or not under good control of the animal.

4. *Neck* — Short, well set to the shoulders, tapering from shoulder to head.

Objections — Long, thick or bulky.

5. *Jowl* — Full, neat and firm tapering from neck to point.

Objections — Thin or flabby.

6. *Shoulders* — Medium width, deep, full, not extending above line of back.

Objections — Narrow, cramped, flat, extending above line of back and sloping too much from point to top.

7. *Chest* — Large, deep and roomy; full girth, extending down even with line of belly.

Objections — Narrow at top or bottom; small girth, cramped or tucked up.

8. *Back and Loin* — Slightly arched; good breadth, with uniform thickness from shoulders to hams; full at loin.

Objections — Narrow, crested or drooped behind shoulders; surface ridgy or uneven.

9. *Sides and Ribs* — Sides full, smooth form, carrying size evenly from shoulders to hams; ribs strong, well sprung at top and bottom.

Objections—Sides thin, flat, flabby or creased; ribs not well sprung.

10. *Belly and Flank*—Straight and full, devoid of coarseness; flank full and running nearly on line with side.

Objections—Belly sagging or flabby, coarse; flank thin or tucked up.

11. *Hams or Rump*—Hams full, long and deep; rump slightly rounded from loin to root of tail; buttock full, neat and firm.

Objections—Ham narrow, cut too high in crotch; rump too steep or too narrow, peaked at root of tail; buttock flabby.

12. *Legs and Feet*—Legs medium length, set well apart and squarely under body, wide above knee and cock, rounded and well muscled below, tapering medium bone, pastern short and nearly upright; foot solid, short, smooth, enabling the animal to carry its weight with care.

Objections—Legs too long or too short, slim, crooked or coarse; muscles weak or light; joints coarse, not tapering; pastern too long, crooked or slender; foot long, slim, weak or turned up.

13. *Tail*.—Medium length, straight or slightly curled.

Objections—Coarse, long, clumsy, swinging like a pendulum.

14. *Coat*—Fine, straight, smooth.

Objections—Bristles or swirls, too coarse or curly.

15. *Color*—Black; white points admissible.

Objections—Too much white; too many and too large white spots on body.

16. *Size*—Large for condition; boar two years and over should weigh 500 pounds, sow same age 450; twelve months boar or sow 300; six months boar or sow 175 pounds.

17. *Action and Style*—Active, vigorous, graceful, style attractive.

Objections—Dull, sluggish and clumsy.

18. *Conditions*—Healthy; skin free from defect; flesh smooth, firm and evenly laid on.

Objections—Unhealthy; skin scurfy, scaly or mangy; hair harsh, not growthy.

19. *Disposition*—Docile, quiet and easily handled.

Objections—Cross, restless, nervous, sluggish or without ambition.

## DISQUALIFICATIONS

*Color* — More white than black.

*Form* — Split or creased hoof; broken down feet; and radical deformity.

*Condition* — Any diseased condition; barrenness.

*Size*. — Not two-thirds standard weight.

*Pedigree* — Not eligible to record.

## SCALE OF POINTS

Head and Face.....	4	Feet and Legs.....	10
Eyes . . . . .	2	Tail . . . . .	1
Ears . . . . .	2	Coat . . . . .	2
Neck . . . . .	2	Color . . . . .	2
Jowl . . . . .	2	Size . . . . .	5
Shoulders . . . . .	6	Action and Style.....	4
Chest . . . . .	12	Condition . . . . .	4
Back and Loin.....	15	Disposition . . . . .	3
Sides and Ribs.....	8		
Belly and Flank.....	6	Total . . . . .	100
Ham and Rump.....	10		

## SANITATION

E. L. VOLGENAU, D. V. S., BUFFALO, N. Y.



A glance at the history of medicine teaches us the important rôle played by sanitation or hygiene in the control of the plagues, which formerly devastated mankind.

We read of the malignant epidemics of "prison typhus," caused by overcrowding and insanitary conditions in foreign prisons, which entirely disappeared when the causative factors were removed; how scurvy, that plague of seagoing people, can be prevented by the use of lime juice, when fresh vegetables are not procurable; how the dreaded smallpox, prevalent during the middle ages in ever-recurring epidemics, was reduced to a minimum, following the publication of a letter by Lady Mary Montagu, wife of the English ambassador at Constantinople in 1720, in which she reported the marvelous results following the introduction into the human system of the virus of smallpox derived from the pustule of the human variety, as practised by Oriental people. Seventy years later this method was improved upon by Jenner, who advocated, as a preventative against smallpox, the use of the virus of cowpox — the vaccination in vogue at the present day.

The ravages of these plagues can best be appreciated when we consider the estimate that 25,000,000 people died from the "black death" which swept across Europe during the fourteenth century, 100,000 deaths occurring in London alone.

In comparatively recent times sanitary science has achieved its greatest triumphs. The building of the Panama canal was made possible by applying the laws of sanitation to conditions on the Isthmus. The failure of the French was not due to lack of money or skill, but to the prevalence of yellow fever

and malaria, which killed off the white men employed on the work in such numbers that the project was abandoned. The simple expedient of protecting the workmen in the Canal Zone against the bites of mosquitoes, which introduce the virus of yellow fever into the blood with their sting, made possible the triumphant success of our American engineers.

Typhoid fever, one of our modern plagues, can be prevented in most cases by boiling the drinking water, and a lasting immunity can be produced by the injection of a typhoid antitoxin. This antityphoid inoculation has been made compulsory in the United States army, and as a result this one disease, which caused more deaths during the Spanish-American war than resulted from the enemy's bullets, has been almost eliminated!

Health has been defined as that condition of animals or man which upon examination of a sufficient number of specimens we find to be the most common. The condition known as health is what is termed normal. Any radical departure from this condition is known as disease, which is the abnormal condition. It is the function of sanitation or hygiene to preserve health and incidentally to ward off disease. This is done by attention to those principles which experience has taught us are necessary for the maintenance of the organism in normal, or, in other words, healthy condition.

Quarantine or isolation of the sick, thorough disinfection of infected premises and of all utensils and materials that have been in contact with diseased persons or animals; the removal of refuse; proper housing, included in which are questions of ventilation and drainage; the quality of various materials used as food; the provision of an abundance of clean, wholesome drinking water and attention to personal cleanliness are the measures used by sanitarians to protect the healthy and to guard them against disease.

When any of these measures are neglected, the abnormal condition known as disease makes its appearance. We know from experience that over-indulgence in food will lead to digestive troubles; that insufficient clothing will result in chilling the surface of the body, causing an increased quantity of blood to be sent to the internal organs, which results in the condition

known as congestion, and which if neglected frequently terminates in inflammation. We are aware of the ills that follow defective plumbing, insufficient ventilation, improper heating and poor drainage in our homes. It is needless to dwell upon the advantage of personal cleanliness, for frequent bathing is universally accepted as one of the essentials of health.

What is applicable to the health of man is also true of the health and well-being of animals. Conditions which would injuriously affect man, cattle, horses and sheep are just as apt to interfere with the health of swine. Given the opportunity, a hog is just as clean as a cow or a horse; but if you shut a hog in a small pen, with no bedding and with the door barred, he will foul his sleeping quarters and become a disgusting, loathsome object. Provide the same hog with a deep bed of clean straw, however, in a well lighted and properly ventilated pen, with easy access to yard or runway free from stagnant pools or filthy wallows, and he will keep as clean as any other animal; more important still, he will be healthier, thriftier and in every way a more profitable investment.

#### SHELTER

While it is desirable, it is not within every man's means to provide concrete hog houses, guttered and sewered and so constructed that they may be kept absolutely clean and sanitary. Where sand and gravel are easily procurable, concrete construction is probably as cheap as any in the long run. Many things can be done, however, to improve conditions in the hog inclosures on our farms; roofs can be made water tight, wood floors can be provided and provision made for the admission of fresh air and sunlight, our two most efficient disinfectants. Troughs can be so constructed that they may be drained through tile pipe leading to tile drains, and similar drainage can be provided for floors. This will lessen the labor of cleaning and will keep the floors free from dampness.

In concrete houses preference should be given to wood floors laid on concrete sills, particularly for brood sows and their young, as concrete floors are too cold during most of the year. For feeding and fattening pens concrete floors are less objectionable, but

even here our preference is for wood. Deep beds of clean straw should be provided, to be removed as often as the old straw is trampled down, and free access should be allowed to runways during both winter and summer. As shade is an important consideration during the hot weather preference should be given in the construction of hog runways to places where trees will afford the necessary protection. A heavy tar paper between the lower and upper layers of concrete will prevent rise of moisture, and such floors have proved to be warm and easily cleaned.

#### WATER

A liberal supply of clean, cold drinking water is of great importance to the successful rearing of hogs. Water of questionable character, which is found in stagnant pools, frequently causes diseases which may be mistaken for hog cholera or swine plague. Hog wallows should be so constructed that they can be cleaned and disinfected, and here again concrete will in the end prove the cheapest material to use if hog inclosures are to be kept clean and sanitary.

#### FOOD

The idea is quite general that any kind of food is good enough for hogs. It is a common practice to feed all the swill and waste material on the farm, including the dish water, which is frequently heavily charged with strongly alkaline soap powders. For use on many farms swill is gathered from a great variety of places, such as city residences, restaurants, public institutions, also hospitals. It happens frequently that many harmful foreign materials find their way into receptacles where offal is kept, and eventually this is transported to the farm, where it is fed to the hogs. When we consider these facts, we cease to wonder that the mortality of hogs is very great, the diseases being of so vague a character and with such a perplexing train of ante-mortem symptoms as frequently to mystify men who have made animal diseases a life study.

To illustrate: let us suppose that in the swill gathered from a hospital there are present several yards of soiled iodoform gauze, some 90 or 100 strychnine tablets—in all three or more grains of strychnia—with perhaps a supply of bichloride tablets

and a variety of other drugs of a harmful nature such as may find their way into the waste receptacle of a large institution. Let us suppose further that one hog gets the gauze, another the strychnine, a third the bichloride, etc. It may be readily understood that three or more hogs might die suddenly in that herd, with no two of them presenting the same symptoms. The average owner, fearing the loss of the entire herd, applies to the state for help. When the state veterinarian calls to investigate the reported "cholera outbreak," he is so confused by the train of symptoms reported by the solicitous owner that he vows hog diseases are "many and various" and that no one seems to know much about them. If the veterinarian, by careful questioning as to the source of the food supply of these animals, reaches an intelligent conclusion as to the cause of death and accounts for the apparent great discrepancy of symptoms shown by the individual hogs by the inference that they have been poisoned with one or a variety of injurious materials present in the food, he will have guided the owner to a safe method of guarding against a repetition of the disaster.

Contagious and infectious diseases may also be caused by food. The rind of ham or bacon, found in restaurant refuse, may be the means of introducing hog cholera into a herd and tubercular sputum of human origin may cause tuberculosis. Skim milk from creameries is thought to be responsible for much of the tuberculosis found in hogs. In some western states it is the practice to feed hogs after cattle, the hogs picking up the partly digested corn in the droppings of cattle. It is thought that much of the tuberculosis found in hogs where this method of feeding is in vogue is contracted in this way. Slaughterhouse refuse may be the cause of various diseases, particularly of the parasitic varieties, for the offal frequently contains encysted forms of parasites injurious to hogs. With greater care in the choice of food, many dangerous affections may be reduced to a minimum or entirely avoided.

Because hogs are dying on the farm is no reason for jumping to the conclusion that they are suffering from cholera or swine plague, as many hog diseases present almost identical symptoms and may easily be confused with them. Hogs suffer from as

great a variety of ailments as other classes of animals. Careful investigations and post-mortem examinations have revealed many interesting conditions, such as heart disease, dropsy, peuro-pneumonia, parasitic invasions, poisoning, intestinal disorders, etc., in reported cholera outbreaks. The diagnosis is therefore of great importance and, if any doubt exists, the opinion of an expert should be procured.

Hog cholera is undoubtedly the cause of death of a great many hogs; but the tendency in present times is to blame this one disease for the death of all hogs and the belief is all too prevalent that the use of serum inoculation is a specific. When hog cholera is clearly diagnosed, serum should of course be promptly used, but the sanitary precautions which are absolutely necessary to circumscribe the outbreak and to guard against future infection should not be neglected.

When disease exists among hogs, those animals showing no symptoms should be promptly separated from the sick ones, dipped in some reliable stock dip and removed to a clean, uninfected shed. If swill is being fed it is well to give them a radical change in diet. The food should be light and easily digestible. A thin slop of bran, oil meal or shorts, with perhaps a little ground corn, is the diet suggested for hogs suffering from intestinal disorders. Green food and a liberal supply of clean drinking water are of great value. A mixture of charcoal and air slaked lime with a little common salt and ground green bone is recommended as mineral food. Improved sanitary surroundings and careful attention to diet will in many cases effect a prompt cure in animals suffering from simple intestinal disorders, and, when the disease is of an infectious or contagious character, will prove of benefit and assist in the cure.

Animals dying from infectious diseases should be burned or deeply buried, the carcasses being covered with unslaked lime. When the disease is under control, the quarters where sick animals were kept should be carefully and thoroughly disinfected.

#### DISINFECTION

The method used to disinfect premises where contagious disease has existed will depend largely upon the extent and character of the infected premises. I have seen hog pens which

could be made safe in only one way, viz., entirely destroying them by fire.

Presuming that the quarters where hogs are kept are of good construction, the first step necessary will be to remove all litter, brush down walls and ceilings, tearing out all partly decayed woodwork. The litter and decayed woodwork should be burned. The pens should next be scrubbed with hot water, to which a reliable disinfectant has been added. Six ounces of crude carbolic acid to each gallon of water will make a good, cheap disinfectant solution for this purpose. After thorough cleansing in this manner, the whole interior of the building should be covered with lime-wash, containing 6 ounces of chloride of lime to each gallon of lime-wash. The runways may be covered with unslaked lime, which should be left to slake on the ground and then ploughed under. Under no circumstances should the premises be used again for healthy hogs until disinfection has been carefully performed, and it is well to leave the building unoccupied for at least thirty days after disinfection has been completed.

#### SUGGESTIONS FOR PREVENTING HOG CHOLERA

It is always easier to prevent disease than it is to cure it after it has once become established. Hog cholera is undoubtedly the greatest menace to successful hog raising and no article on sanitation would be complete without some reference to methods of prevention. Of these, the most important is undoubtedly quarantine. All newly purchased animals should be kept separate from the hogs already on the premises for a period of three weeks. If there is no indication of disease at that time, they may be safely placed with the herd. If there is cholera in the vicinity, do not visit the infected premises nor allow any one from such to visit your farm—particularly your hog enclosures or pens. Pigeons, crows and buzzards carry contagion and should be kept off your premises. Most stock yards and railroad loading pens are infected and contagion may be carried on shoes, clothing, wagon wheels and horses' feet.

Bearing these suggestions in mind and avoiding every possible means of carrying infection to your hogs should have the effect of keeping your animals free from disease and making hog raising a pleasant and profitable industry.

## A FEW OF THE COMMON DISEASES OF SWINE

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### THUMPS



Thumps is a very fatal disease of young pigs. It is not a palpitation of the heart but a spasm of the diaphragm the same as hiccoughs in people, for which overfeeding and lack of exercise are responsible.

#### *Symptoms*

The symptoms of the disease are a jerking or twitching movement in the flank, accompanied oftentimes by a sound that may be of such violence as to shake the whole body. During the attack the young pigs often have difficulty in breathing accompanied by spasmodic coughing spells.

#### *Treatment*

The only treatment is exercise. Turn the pigs out of doors in a pasture and the thumps will cease. If this is impossible, provide some means by which they are compelled to exercise. In severe cases it is advisable to restrict the diet for a few days and give a teaspoonful of castor oil. Ten to twenty drops of laudanum may be given on the tongue to overcome the spasms.

### DIARRHOEA

This is often caused by toxic substances in the mother's milk. Sows that are very nervous or excited at farrowing time, or that are fed liberally on heavy grains are usually feverish and often impart poisonous substances in their milk that cause digestive troubles and diarrhoea. Farrowing in dirty, damp and unwholesome pens from which filth germs easily pass up through the open navel often causes a very fatal form of diarrhoea.

*Treatment and Prevention*

Avoid the things that tend to produce this trouble. The sows should be handled and petted so that they will not be excited at farrowing time. A heavy grain ration should be withheld or greatly lessened, and a sloppy, laxative one supplied several days before farrowing time. Dry, clean and well-lighted pens aid in preventing that form of diarrhoea caused by germ infection.

When medicinal aid is necessary it is often advisable to treat the mother, since the medicinal properties of many drugs are excreted in the milk. If she appears feverish or constipated she should be given three or four tablespoonfuls of castor oil. This should be followed in twelve to twenty-four hours by laudanum, one to two teaspoonfuls as often as the case requires. Some prefer to give the laudanum on the pig's tongue, the dose ranging from ten to twenty-five drops.

## SORE MOUTHS

Very often a number of the litter do not grow as do the rest. The sow often times will not let them suckle. This trouble is almost invariably caused by the sharp canine teeth, and is the basis for the black teeth theory. Farmers often break them off or pull them with a pair of pinchers, as a result of which their pigs at once make remarkable gains. It is not because the teeth are discolored or black, but by removing these sharp, needle-like ones it prevents them from cutting their own cheeks and tongue and at the same time relieves the mother of pain and injury while they are nursing.

It is unnecessary to pull out the teeth. Simply clip them off with a pair of cutting pinchers so that the end of the tooth is made blunt. Soon after birth the mouth of every pig should be examined and those teeth having sharp, needle-like points should be clipped off.

Infectious sore mouths in pigs, caused by a specific organism, are occasionally found where the sow farrows in a wet, muddy yard. The mud, harboring these germs, penetrates the sow's teats, and the pigs are infected in this way. The mouth and lips swell, ulcers form, and many pigs die.

Change the sow to a clean, dry place and the trouble usually ends.

## RHEUMATISM

This is a very common ailment of swine, especially during the winter months. As his name implies, when not eating he is looking for the warmest place in the pen, and those that are so fortunate as to sleep in the centre are kept extremely warm by their associates. When all are aroused at feeding time the ones in the center are often covered with perspiration even in the coldest weather. They are suddenly chilled and rheumatism develops.

Large quantities of heating horse manure used in the pig pen in cold weather often causes rheumatism in the same way. Too much straw in which they can bury themselves will also produce similar results.

Among other causes we must mention overfeeding — especially with corn,—constipation, lack of exercise, damp pens, wet bedding, and cement floors not properly constructed.

*Symptoms*

Rheumatism is often confused with the disease known as paralysis, but differs materially in the important details. Some cases develop very quickly, oftentimes over night, while many of the milder cases come on very gradually. In acute cases the pig is found lame, stiff, disinclined to stir and when forced to move often squeals as evidence of pain. It is usually confined to the joints of the limbs and muscles of the back so that when on his feet he stands on his toes and when moving, walks as though he were on stilts. The joints may be normal in size at the beginning but are tender if pinched and usually swell after a few days. Flexion or extension of the limbs causes intense pain. As the disease progresses he rapidly loses flesh, and refuses to get on his feet. Such cases usually terminate fatally in a few days while the less severe ones pass into the chronic form and linger along for weeks and sometimes months.

Practically nothing can be done as regards the treatment of acute rheumatism. Hogs suffering from this trouble are better slaughtered and put out of their misery. The milder cases that come on gradually, if detected in time, sometime respond to treatment.

•

Prevention is the keynote of this disease. Too many pigs should not be confined in small quarters where they are apt to become overheated by close contact with one another. Keep the pens in uniform condition, not oversupplied with bedding one week and the next with only wet manure for the pigs to lie on. Pigs that live in the open colony houses during the winter and are made to travel a quarter of a mile a day through the snow for their feed rarely contract rheumatism.

### *Treatment*

The diet should consist of soft, easily digested food, and the bowels should be kept slightly loose by small and frequent doses of castor oil. Unless the weather is extremely unfavorable, turn them outdoors and let the boys chase them around the barn several times a day. Farmers seldom realize what Mother Earth and exercise will do for a sick hog.

A teaspoonful of salicylate of soda night and morning for three days and then skip three and repeat is about the only drug worth trying.

### PARALYSIS

Paralysis or loss of control, especially of their hind parts, is one of the most serious diseases affecting swine in this state. I never have heard of a satisfactory explanation of its cause that would include all cases and conditions. We know that the majority of cases can be prevented by proper care, feed and environment, but still, even in the best kept herds, this disease often causes serious loss.

The following are some of the causes: impaction of the bowels or constipation. When the bowels are over distended they often press on the nerves going to the posterior parts and thereby cause paralysis of the parts supplied by those nerves. Rickets or a ration lacking in mineral matter. This is quite common where pigs are fed large quantities of corn. In rickets the bones sometimes break and the pig presents symptoms of paralysis.

Feeding the young pigs heavily on grain with but little chance for exercise is very often the cause of the trouble. The weight of their body increases so rapidly during the first seven or eight months, often from a few pounds at birth to upwards of three

hundred pounds, that their unused limbs are not developed fast enough to sustain this rapidly increasing weight. This breaking down in the limbs is still often improperly called paralysis.

Minor causes are tumors pressing on the spinal cord, parasites, injuries to the back.

### *Symptoms*

Often the first noticeable symptom is a wobbling or staggering gait. The hind legs are not carried in a straight line but often sideways or well under the body. Finally the pig goes down and simply drags its hind parts.

### *Treatment*

As the majority of cases can be prevented this should be the chief aim of the breeder. Liniment and blisters applied along the back are recommended. Nux Vomica, from ten to twenty drops twice a day for a medium-sized hog, given until the muscles twitch, will often aid nature in overcoming the paralysis.

## DISEASES OF THE DIGESTIVE ORGANS

The diseases of the digestive organs, like those of the respiratory tract, must be discussed collectively. They include acute and chronic indigestion and inflammation of the stomach and intestines. The general causes are due to errors in feeding and too close confinement. The digestive organs of a pig, like those of a horse, are often deranged if a sudden change is made in the food supply. This trouble is very common when changing from sweet to sour milk at weaning time, also at fattening time when the swine are brought in from the pasture and suddenly put on a heavy grain ration.

Other causes usually cited are: musty, moldy and spoiled food, dishwater containing washing powders and other irritating substances, worms if in large numbers, and irritating drugs not sufficiently diluted. Swill barrels that are allowed to stand without frequent cleansing often form an ideal breeding place for septic or disease producing germs.

### *Symptoms*

The pig does not thrive, becomes emaciated, often eats sparingly, and constipation and diarrhoea may alternate. In some

cases the pigs have severe abdominal pain and flinch if pressed back of the ribs in the region of the flank. Vomiting frequently occurs in acute cases and attacks of blind staggers in chronic cases.

### *Treatment*

Remove the cause if possible. It is often advisable to change the ration and feed sparingly for a few days. Charcoal is excellent if there is a tendency to bloat or if the stomach emits a sour, disagreeable odor. Charcoal, salt and ashes are about the best condition powder you can give a pig, and if kept before them continually there is no danger of their eating too much. In the acute form vomiting is the quickest means of relief. Mustard, two to four tablespoonfuls in warm water, affords a quick and effective emetic. A laxative to clear the intestines is very essential. Castor or raw linseed oil given in from one to four ounce doses, according to size of the pig, is ideal for this purpose. If diarrhoea follows after the bowels are emptied it can be checked by giving one or two teaspoonfuls of laudanum or one-half teaspoonful of subnitrate of bismuth, to hogs weighing one hundred pounds or more. If the pig is confined in the pen give him access to the field and he will find the right herb in the majority of cases to cure himself. No animal enjoys an outdoor life with freedom to roam and the right to select its own food and condiments quite as much as the pig. I believe that many of their ailments are due to the forced and unnatural environment to which we are subjecting them.

### DISEASES OF THE RESPIRATORY TRACT

Under this title we include colds, sore throat, bronchitis, pleurisy and pneumonia, all of which are closely related. As the pig is often afflicted with two or more of these troubles simultaneously, the conditions that produce them, methods of treatment and prevention are practically the same.

### *Causes*

The causes are practically the same as those given in the preceding paragraphs on rheumatism, with the addition of poor ventilation.

*Symptoms*

These will vary somewhat, depending upon which part is most seriously affected. If a pig coughs, discharges from the nose, acts dull and feverish, evinces pain when swallowing, and breathes in an unnatural way, the chances are that he has caught cold and some part of the respiratory tract is congested and inflamed. (Note.—The pig often coughs and discharges from the nose when affected with tuberculosis or lung worms.)

*Treatment*

The sick animal should be separated from the rest and placed in a dry, clean, well-lighted and ventilated place and fed soft, easily digested food. The bowels should be kept loose by frequent doses of castor oil, one or two tablespoonfuls to each one hundred pounds live weight. Tincture of aconite, three to six drops, placed on the tongue night and morning for each one hundred pounds live weight is excellent during the earlier stages. Ten to twenty grains of quinine given in two or three teaspoonfuls of niter or alcohol two or three times a day is also very beneficial.

## BRAIN AND NERVE DISEASES

Swine are occasionally affected with these troubles. Among the causes should be mentioned: errors in feeding, such as a too narrow and concentrated ration, foods that are fermenting and contain poisonous substances, indigestion, constipation, too close confinement, lack of exercise, parasites, tumors, blows or injuries on the head, sunstroke or overheating.

*Symptoms*

The symptoms vary greatly depending upon the cause and the part of the nerve centers most seriously affected. In a few cases the pig appears dull, sleepy and disinclined to move, but in the majority of cases he is very excitable and delirious. Periods of dullness and excitement may alternate. Sometimes the injured part demonstrates itself in the form of blind staggers, as trembling, throwing the head upward and falling over backwards, going around in a circle, falling down and

getting up. Frequently in small pigs it manifests itself in the form of fits as when consciousness is lost and the pig falls with its stiffened limbs extended, head thrown backward with saliva drivelling out of its mouth. When the inflammation extends over a large area of the brain or its coverings the attacks are of a longer duration and often continuous. The pig is usually very nervous and excitable, pushes its head against hard objects, often walks for hours around the pen with saliva drivelling from the mouth.

### *Treatment and Prevention*

As many of the brain disorders are really symptoms of some other disease our aim should be to remove the underlying cause. Since errors in feeding, resulting in indigestion and constipation, are so frequently the cause of brain troubles we should restrict the diet and feed only easily digested and laxative food. A large dose of salts or oil should be given, as this removes the offending material from the bowels and indirectly lessens the blood supply to the already congested brain.

If the fits which are common with young pigs are caused by intestinal worms, give the pig a little turpentine and oil and this will remove the worms. Cold water thrown in the face will often lessen the duration of the spasms.

In all of these disorders the animal should be removed to a cool, quiet, shady place protected from the sun. Ice or cold water applied to region of the brain aids in reducing the blood supply to that organ. Bromide of potassium, one-half to one teaspoonful, given two or three times a day in a little water has a quieting effect and often produces good results. This should not be given when the pig is unable to swallow.

### LICE

The pig's environment predisposes him to this parasite. Thus we find swine that are kept in crowded and unwholesome pens and in herds that are poorly cared for more commonly infested with lice.

*Symptoms*

The hog bites and scratches himself and rubs on anything available. If at large he will seek a mudhole in which to roll to rid himself of this parasite. The hog lice is the largest species of its family, being from one-eighth to one-fourth of an inch long when fully matured, and is easily detected where the skin is thin as at the root of the ear and inside the thigh. The skin is often devoid of hair, becomes eroded and frequently covered with sores. Pigs badly infested with lice seldom gain in weight but on the contrary rapidly lose condition and sometimes die.

To rid a herd of swine from lice it is often necessary to treat the pens, bedding, etc., as well as the individual. The manure should be hauled to the fields or disinfected. The straw and litter should be burned, and the pens thoroughly disinfected by spraying with a 5-per cent. solution of any of the coal tar products. Whitewashing the pens is also beneficial.

*Treatment*

The entire flock should be treated the same day that the pens are disinfected. In large herds the dipping tank is advisable, but in the ordinary herds of this state a sponge or cloth will answer the purpose. Every part of the body should be saturated.

A 2-per cent. solution of the coal tar products is very effective, or one gallon of kerosene added to six or eight gallons of warm, soapy water. Crude petroleum, one gallon to four gallons of water, gives good results. In the winter months insect powder can be used instead of the wash. This should be thoroughly rubbed in with a coarse brush. One application is never sufficient. In about ten or twelve days the process should be repeated with the pens, bedding, etc., as well as the swine. The young lice or nits are generally hatched by this time and the second application catches them. Sometimes it is necessary to treat several times.

## HOG CHOLERA

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### INTRODUCTION



Hog cholera is recognized as an extremely infectious disease of swine, but is not known to affect other species of animals. It causes losses amounting to millions of dollars annually in the United States, and therefore concerns every consumer of meat products, owing to the depreciation in the supply of pork, which affects all foodstuffs to a certain degree.

The first recorded outbreak of hog cholera in this country was in 1833, in the state of Ohio, and was thought to have been caused by an importation of infected hogs from Europe, where the disease is supposed to have existed a long time. The disease has not been prevalent to any great extent in this state, but is unquestionably increasing from year to year.

### CAUSE

Hog cholera, like rabies, foot and mouth disease, and some other animal diseases, belongs to that class of maladies the exact cause of which has not been found. Hog cholera is believed to be produced by a germ (virus) so minute that it cannot be seen with the most powerful microscope, and so small that it passes through the finest porcelain filter. It has been proven that filtered blood from infected animals when injected into susceptible hogs usually produces cholera. In advanced cases of the disease, this virus is present in nearly if not quite all body tissues, blood, feces, urine, etc.

There are a number of accessory causes, such as poor food, insanitary conditions, dirty feeding troughs, damp sleeping places,

etc. These, of course, cannot in themselves produce cholera, but they lower the vitality of the hog so that he may become easily affected. Anything which tends to impair the health of the animal should be regarded as a predisposing cause.

#### SUSCEPTIBILITY

A small percentage of hogs seem to have a certain amount of natural resistance, or they have the disease only in mild form and recover. There is no truth in the statement that the Mule-Foot or any other breed is immune to hog cholera, as all breeds seem to be equally susceptible — young pigs generally more than older ones, and fat hogs contracting the disease quite readily.

#### PERIOD OF INCUBATION

This is the time that elapses from exposure to the disease until symptoms develop. It varies to a great extent, but is usually from one to three weeks, depending upon the susceptibility of the animal, strength of the virus, method of exposure and other influences.

#### SYMPTOMS

Certain individuals may die without showing any noticeable symptoms, being found dead before the owner is aware that the disease exists.

The symptoms of hog cholera are by no means constant and they often vary greatly. As a rule, the first thing noticed by the owner during an attack of the disease, is lack of appetite in one or more animals. They often come slowly to the trough, eat a little and go and lie down; they may refuse to eat, and remain lying while the others feed; or, may stand by themselves with arched back and drooping ears and tail. Because of the high fever they frequently exhibit symptoms of thirst. There may be dullness, weakness, stiffness, depression and often a disinclination to move, or they may have a staggering, unsteady gait, the hind quarters appearing partially paralyzed. Animals often have chills followed by a high fever of from 104 to 108 degrees Fahrenheit, the normal temperature of the hog being about 102 degrees Fahrenheit. The breathing is quick and difficult, perhaps accompanied by a cough. Purple or reddish spots frequently

appear along the abdomen, between the thighs and behind the ears. This is particularly noticeable in hogs with light colored skin. Usually there is constipation followed by a diarrhoea, and often there is inflammation of and watery discharge from the eyes, which later dries up and gums the lids together.

#### TYPES OF THE DISEASE

Hog cholera usually occurs in two types, known as acute and chronic. Those first affected in a herd usually show the acute, while many of the later cases have the chronic form. When the resistant power of an animal is low, or the virus has a high degree of virulence, you may expect to find the acute type of the disease; while the reverse conditions often produce an opposite effect. These two factors, however, may vary and thus cause the symptoms and course of the disease to show corresponding changes.

The acute type is quite rapid in its course and animals affected with this form usually die in a few days, while those having the chronic type may linger for days, weeks or even months before death or recovery. Those surviving are often practically worthless, owing to a weakened and stunted condition; and it would frequently be better if these animals were killed at once instead of being allowed to remain, perhaps causing new infections on the premises or spreading the disease to adjoining farms.

In the chronic type the symptoms are similar to the acute, except that affected animals eat but little and lose flesh rapidly, becoming very much emaciated, so much so that they stagger or drag their hind parts when they walk. These animals rarely recover sufficiently to be of much value.

#### POST-MORTEM

The best and most accurate means of diagnosing hog cholera at the present time is by an autopsy, although as the post-mortem appearances, like the symptoms, vary greatly, and characteristic lesions may be altogether absent, it may be necessary to make a careful examination of several bodies before coming to a definite conclusion.

The examination can be made as follows: Lay the hog on its back and with a knife open along the middle of the chest and belly, through the skin, fat and muscles, the entire length of the

body. Dissect the skin from the chest, thus exposing the ribs, which should then be cut or broken off about two inches on each side, removing them together with the breast bone, making a cross incision on each side through the flanks, then the sides can be laid over exposing to view the various organs.

In cholera the kidneys are usually found to be darker than normal, but the most characteristic change and probably the most positive is the peculiar dotted appearance of these organs, often resembling the shell of a turkey egg. These are not only present on the surface, but may also be seen upon cutting into the tissue of the kidney. These small red spots, or hemorrhages,

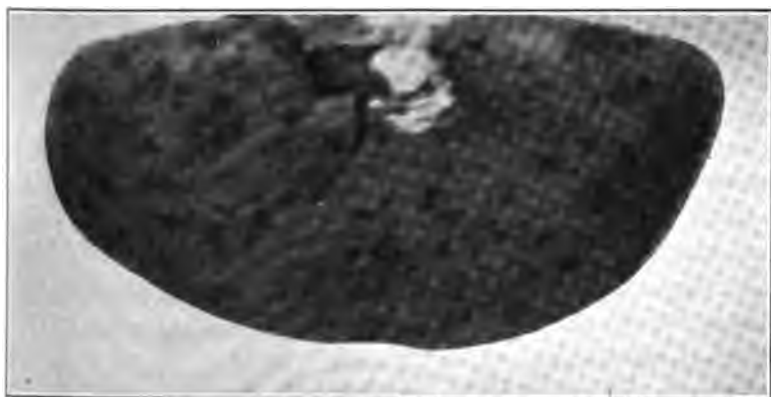


FIG. 52.—KIDNEY FROM HOG AFFECTED WITH CHOLERA, SHOWING SPOTTED CONDITION.

vary in size from minute dots to the size of a pin head or larger, and can best be seen by removing the skin (capsule) of the kidney. They cannot be washed off, being caused by the rupture of minute blood vessels which allows the blood to escape into the tissues. Similar red spots are often present on the surface of the heart, lungs and intestines, and also on the inside lining of the bladder; parts of the lungs may appear solid, somewhat resembling the liver; the spleen may be enlarged and dark in color.

Ulcers are often present on the inner lining of the first portion of the large intestine (cæcum) near where the small intestine unites with it. These changes are most often present in the chronic type of the disease. These ulcers are usually round and hard with a dark center, varying in diameter from 1/16 to one

inch and projecting above the surrounding surface. Because of their form these are often referred to as "Button Ulcers."

All lymphatic glands are usually much enlarged, and red, bluish or black in color, the normal color being grayish.

#### DIAGNOSIS

If a number of hogs become sick, it is advisable to study the symptoms of the disease carefully and take the temperatures of several of the sick animals. Abnormally high temperatures of a number of animals in a herd indicate the presence of an infectious disease.

If any hogs in a herd die, a careful post-mortem examination should be made as soon as possible by a competent veterinarian or other person who has had experience with this disease, as it is possible for lung worms, pneumonia and garbage poisoning to be mistaken for hog cholera. If the disease is cholera, it is very essential to make an early diagnosis of the disease, as this makes possible the use of preventive treatment when it will do the most good and before many of the herd are affected. The bacteriological examination of the tissues is of but little value in this disease, since at the present time the organism causing hog cholera is not known.

In making a positive diagnosis, a number of things must be taken into consideration—particularly the nature and history of the outbreak—as a positive diagnosis is not always possible from the symptoms and post-mortem examination. Where the disease is apparently of a contagious nature, spreading to healthy swine, the affected individuals showing high temperatures, it is quite safe to assume that the disease is hog cholera, especially if the disease exists in the neighborhood or if animals have been added to the herd within a few weeks.

#### SPREAD OF THE DISEASE

Hog cholera may be spread by the intermingling of healthy and diseased animals, but we believe that the majority of outbreaks are caused, not in this way, but by indirect contact with infected material which is carried to them in some way by man or animals, running streams, etc.

Excretions from infected hogs usually contain the virus of the disease and therefore should not be allowed to remain around the premises, but should be hauled out, spread over the ground and plowed under immediately. If left on the surface, the heavy rains might wash the virus into the streams or to other hog pastures. Any agency carrying particles of dirt from an infected hog lot or yard may be the means of starting new outbreaks of the disease. It is advisable after driving through infected hog pens or lots to disinfect the horses' feet, wagon wheels, and all implements used in handling dead animals. Birds, dogs, cats, mice, rats, rabbits, skunks and fowls may carry the disease from infected to uninfected premises. It is therefore evident that there are many means by which the disease may be carried, and every precaution must be taken to reduce the number of such channels.

The caring for sick and healthy animals by the same attendant or on the same premises is unwise unless great care is used in changing clothes, disinfecting the shoes, etc., to avoid carrying infected material from diseased to healthy animals.

Public stockyards usually harbor the infection. After visiting such places people should use great care in disinfecting the shoes before going among healthy hogs, or they should wear rubbers and disinfect or throw them away. Swine should not be purchased from such stockyards for feeding or breeding purposes since it has been proven in many instances that hog cholera was first introduced into uninfected territory in this way. All newly-purchased animals should be kept in quarantine for three or four weeks before placing them with the healthy herd, especially when purchased at fairs or in other states known to be badly infected with cholera, or if shipped in cars which have carried hogs. It is wisest to consider all such hogs infected and to isolate them until sufficient time has elapsed to allow the disease to develop or to prove them free from it, unless positive that no cholera existed on the premises from whence they came, and there was no chance for infection in transit.

We believe community breeding to be a bad procedure; but, if it must be done, the board should be kept in strict quarantine and sprayed or dipped, and the pen should be disinfected. After the sows return, they should be kept in quarantine from three to four weeks before returning to the herd.

Garbage from hotels, restaurants and private houses is often the cause of outbreaks of cholera, because of the uncooked meat scraps and bones from infected hogs. If such garbage is to be fed, it should be thoroughly cooked, or hogs fed upon such material should receive the serum treatment. Hogs killed before symptoms develop may have the virus of hog cholera in their tissues, which, if eaten in a raw state, may infect susceptible animals. The burning of all pork scraps is recommended.

Transportation lines are often means of distributing this disease, as it is said to be the practice in cholera districts to send the hogs to market as soon as the first symptoms of the disease appear, thus possibly distributing the virus.

Streams of water flowing through and draining infected pastures are often sources of contagion, especially when there are cases of cholera further up the stream; and again, streams may occasionally be contaminated by hogs being hauled over them.

All hogs that die, particularly those dying from cholera, should be burned or buried deeply—not left on the ground in some out-of-the-way place to decompose or to be eaten by wild animals or birds, thus possibly spreading the disease to healthy herds.

*Burying:* Dig a hole six feet deep, or at least deep enough so there will be a space of not less than  $3\frac{1}{2}$  feet between the upper part of the carcass and the surface of the ground. Two or three inches of lime should be placed in the bottom of the hole and the same amount spread over the carcass, after which the hole should be completely filled. Care should be exercised not to bury carcasses near streams or water courses.

*Burning:* Where several hogs are to be burned at once, it is well to dig a trench about two feet deep and three feet wide, which may be shallow at the ends; or, two trenches may be dug, crossing at right angles, at least three feet deep where they cross, and shallow at the ends. This trench can then be filled with wood or other inflammable material, with iron bars or pipe laid across to act as a grate and to support the bodies. The carcasses are then placed upon the grate, covered with wood, saturated with kerosene and set on fire. If the carcasses are large, they may be cut in several pieces, when they will burn more readily. If possible,

the carcasses should be removed to the place where they are to be buried or burned without dragging them over the ground, and before being cut up or mutilated.

Every owner of hogs should take all possible precaution for his own benefit and that of the community in which he lives; for, the larger the area infected, naturally the more difficult it is to check and eventually eradicate the disease.

#### SERUM

Anti-hog-cholera serum is defibrinated blood drawn from healthy immune hogs which have been rendered especially resistant to cholera. Serum will not cause cholera because it does not contain the virus of the disease, but it does contain substances which seem to neutralize it. It is commonly prepared as follows: hogs are rendered immune by injecting a small dose of virus and serum, practically the simultaneous method. Ten days later large doses of the virus are injected, thus stimulating the cells of the body to produce anti-bodies in the blood, the hog then being known as a hyperimmune. Blood drawn from these hogs, with the fibrin removed, is known as anti-hog-cholera serum; it has little, if any, curative powers and should be used only to prevent the disease in apparently healthy hogs. It should be used early in an outbreak — the sooner the better. A few days may mean either the saving of a large part of the herd, or the loss of hundreds of dollars. Besides, if the disease is allowed to spread without any precautions, it may be the means of infecting the entire neighborhood.

Small doses of serum injected into susceptible animals will render them immune from hog cholera from one to three months, the period of protection varying according to circumstances. Usually the younger the pigs the shorter is the period of immunity. Much of the success following vaccination depends upon the proper application of the serum and care of the swine after treatment.

Virus is blood drawn from a hog which is very sick and about to die from hog cholera, and, as it contains the causative agent of the disease, when injected into susceptible swine it will produce hog cholera in from one to two weeks.

## METHODS OF USING SERUM

*Serum alone:* In this method anti-hog-cholera serum is injected into the muscles or tissues of the hog. If the hog should be exposed to hog cholera just before or within a short time after injection of the serum, it would be practically the same as the double method and immunity would then be more permanent. This method is absolutely safe in that it will not produce the disease, as the serum does not contain the virus. The one bad result from this treatment is that sometimes abscesses may develop at the seat of injection, caused by the introduction of pus-producing germs. This danger can be greatly reduced by care regarding cleanliness in injecting serum and disinfection at the place of injection. We advise that serum be injected by a competent and skilled veterinarian, thus avoiding many of the dangers.

## DOSE OF SERUM

Suckling pigs, 10 to 15 c. c.\*

Pigs weighing 50 to 100 pounds, 20 c. c.

Pigs weighing 100 to 150 pounds, 25 to 30 c. c.

Pigs weighing 150 to 250 pounds, 30 to 40 c. c.

Larger animals in proportion.

*Simultaneous Method:* By this method a small amount of virulent blood or virus is injected at the same time as the serum, but on the opposite side of the body. This produces an immunity which lasts much longer than the single method, and with older hogs may last for life. The objection to this method is that it may occasionally be the cause of starting a new outbreak of the disease, especially when used by careless or incompetent persons. We do not advise the use of this method at the present time, except in unusual circumstances, and then only under very careful supervision.

*Combination Method:* This is a combination of the single and simultaneous methods. The animals are first vaccinated, using the serum alone, and in about ten days the serum and virus are used together as in the simultaneous method.

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\* One cubic centimeter (c. c.) is about 15 drops.

## CLEANING PREMISES

In addition to using serum, the premises should be thoroughly cleaned and disinfected. All litter and rubbish that may have become contaminated by the sick or dead animals should be burned. The pens should be sprayed with a 5 per cent. carbolic solution ( $6\frac{1}{2}$  ounces carbolic to one gallon of water) or some other good disinfectant. The fences should be washed and the floors scrubbed with the same solution. All buckets and troughs should be disinfected or scalded frequently.

## METHOD OF HOLDING HOGS WHILE VACCINATING

Pigs up to 100 pounds in weight can be handled easily by having a man hold them up by the hind legs with the back between his knees, or they can be laid on their backs in a clean trough, thus exposing the hams where the injection is made. Heavy hogs can be held by making a loop in a rope and placing it around the upper jaw, and winding the other end around a tree or post. Pregnant sows can be held in the same way, and it is probably best that they be injected behind the ear, since in this way they would not be handled so roughly, thus possibly causing abortion. It is essential when pigs are about to be vaccinated that they be clean and in a clean pen. This may be accomplished by placing them in a yard or pen with plenty of straw sprinkled with water or disinfectant to keep down the dust, or on a well dampened cement floor. The area of injection should first be washed with soap and warm water, then bathed with 3 per cent. Lysol, Creolin or some other good disinfectant, and the serum injected, after which the site of injection may be painted with tincture of iodine.

The hogs should be kept in a clean place for a week or ten days after injection and should not be allowed to wallow in mud, run through tall weeds or lie in damp, dirty places.

It is safest in vaccinating small pigs not to inject more than 5 c. c. of serum in one place, and for large hogs not more than 20 c. c.

The disadvantage of using the serum treatment alone is that the immunity secured is of short duration, usually not more than two months, and, should infection remain on the premises

for a longer period, or should the virus be re-introduced by new cases of cholera, it would again be necessary to use the serum treatment in order to prevent a new outbreak of the disease.

One great advantage of the serum method alone is that it cannot infect the premises where used, therefore this treatment would not need to be repeated unless cholera were present, and it would not be necessary to treat all pigs afterwards brought on the premises, except as a precautionary measure.

The disadvantage of the double treatment (serum and virus) is the possibility of causing new outbreaks of cholera. This may happen in several ways; viz., the dose of serum being too small compared with the dose of virus; the serum not being up to the standard strength, or the animal highly susceptible; also the possibility of some of the virus being spilled, unless the person administering it uses great care. The premises may therefore be actually infected with the disease, even if none of the animals treated should die. Untreated herds in the vicinity may thus be endangered.

If the double method is employed, we advise its use by skilled and qualified veterinarians, and then only under the supervision of the Department of Agriculture, or by a veterinarian duly authorized.

## SWINE INDUSTRY ON STATE INSTITUTIONS FARMS



JAMES D. EDWARDS, ALBANY, N. Y.

State Inspector of Farms, Department of  
Agriculture

The forty-one institution farms total 21,834 acres of land and have a population of 56,051 people. The following list gives the population and acreage of each farm:

LIST OF STATE CHARITABLE, HOSPITAL AND PRISON FARMS IN NEW YORK STATE,  
GIVING THE POPULATION AND ACREAGE OF EACH

INSTITUTION	LOCATION	AVERAGE DAILY POPULA- TION	TOTAL ACREAGE
<i>Charitable Institutions</i>			
Western House of Refuge for Women	Albion	282	92.57
State School for the Blind	Batavia	166	60.7
State Soldiers' and Sailors' Home	Bath	1,637	375.5
State Reformatory for Women	Bedford	572	195.5
State Reformatory	Elmira	1,515	336
Industrial Farm Colony	Greenhaven		825
State Training School for Girls	Hudson	379	117.43
State Agricultural and Industrial School	Industry	917	1,432.66
Thomas Indian School	Iroquois	216	125
Eastern New York Reformatory	Napanoch	455	294
Custodial Asylum for Feeble-Minded Women	Newark	870	103.44
Women's Relief Corps Home	Oxford	182	103.5
New York House of Refuge	Randall's Island	494	37.5
State Hospital for Incipient Tuberculosis	Ray Brook	369	516
Rome State Custodial Asylum	Rome	1,551	594.83
Craig Colony for Epileptics	Sonyea	1,659	1,898.54
Institution for Feeble-Minded Children	Syracuse	667	274
Letchworth Village	Thiells	146	2,078.85
Hospital for Care of Crippled and De- formed Children	West Haverstraw	104	48.5
State Training School for Boys	Yorktown	9	490.5
		12,190	10,000.02

LIST OF STATE CHARITABLE, HOSPITAL AND PRISON FARMS IN NEW YORK STATE,  
GIVING THE POPULATION AND ACREAGE OF EACH (CONCLUDED)

INSTITUTION	LOCATION	AVERAGE DAILY POPULA- TION	TOTAL ACREAGE
<i>Hospitals</i>			
Binghamton State Hospital.....	Binghamton.....	2,788	1,363
Long Island State Hospital.....	Brooklyn.....	942	220
Buffalo State Hospital.....	Buffalo.....	2,374	183
Central Islip State Hospital.....	Central Islip.....	5,170	994
Gowanda State Homeopathic Hospital..	Gowanda.....	1,332	505
Kings Park State Hospital.....	Kings Park.....	4,724	835
Middletown State Homeopathic Hospital	Middletown.....	2,425	280
St. Lawrence State Hospital.....	Ogdensburg.....	2,350	1,015
Hudson River State Hospital.....	Poughkeepsie.....	3,702	866.68
Rochester State Hospital.....	Rochester.....	1,744	269.39
Utica State Hospital.....	Utica.....	1,862	1,402
Manhattan State Hospital.....	Ward's Island.....	5,339	245
Willard State Hospital.....	Willard.....	2,829	1,217
Mohansic State Hospital.....	Yorktown.....	89	273.54
		37,670	9,668.61
<i>Prisons</i>			
State Prison for Men (and Prison for Women).....	Auburn.....	1,329	2.5
Great Meadow Prison.....	Comstock.....	543	998.27
Clinton Prison.....	Dannemora.....	1,393	159
Dannemora State Hospital.....	Dannemora.....	610	134
Matteawan State Hospital.....	Matteawan.....	1,005	483
Sing Sing Prison.....	Ossining.....	1,281	70
State Farm for Women.....	Valatie.....	30	319
Wingdale Prison.....	Wingdale.....		
		6,191	2,165.72
TOTAL FOR INSTITUTIONS.....		56,051	21,834.33

In all large enterprises the by-products are important factors and the marketing of them often means success or failure to the business. At our state institutions, which feed thousands of people daily, we have a by-product of kitchen scrap, or garbage, as it is usually called, which is being utilized for the growing of swine. The value of this by-product is shown in the following table:

PORK PRODUCTION OF THE STATE INSTITUTION FARMS FOR THE YEAR ENDING  
SEPTEMBER 30, 1913

INSTITUTION	AVER- AGE DAILY POPULA- TION	TOTAL VALUE PORK PRODUCT	COST OF FEED NOT GARBAGE	VALUE OF PORK PRO- DUCED BY GARBAGE	VALUE PER CAPITA OF PORK PRO- DUCED BY GARBAGE	LOSS BY NOT KEEPING SWINE
<i>Charitable Institutions</i>						
Albion.....	282	\$242	\$39	\$203	\$0.72	
Batavia.....	166					\$149
Bath.....	1,637	5,463	500	4,963	3.03	
Bedford.....	572	1,368	144			
Elmira.....	1,515	3,606	100	3,506	2.31	
Greenhaven.....						
Hudson.....	379	1,252	395	857	2.26	
Industry.....	917	1,292	411	881	.96	
Iroquois.....	216	996	396	600	2.77	
Napanoch.....	455	1,128	331	797	1.75	
Newark.....	870	281	118	163	.18	
Oxford.....	182	1,511	658	853	4.68	
Randall's Island	494					445
Ray Brook.....	369					332
Rome.....	1,551	7,432	2,540	4,892	3.15	
Sonyea.....	1,659	2,355	430	1,925	1.16	
Syracuse.....	667	1,005	699	306	.45	
Thiells.....	146	263	196	67	.45	
W. Haverstraw..	104	80		80	.76	
Yorktown.....	9	225		225	25.00	
Total.....	12,190	\$26,763	\$6,957	\$20,318		\$926
Average.....					\$1.66	

<i>Hospitals</i>						
Binghamton.....	2,788	\$6,356	\$296	\$6,060	\$2.17	
Brooklyn.....	942					\$848
Buffalo.....	2,374	3,710	134	3,576	1.50	
Central Islip.....	5,170	3,361		3,361	.65	
Gowanda.....	1,332	1,774	737	1,037	.77	
Kings Park.....	4,724	2,354		2,354	.49	
Middletown.....	2,425	1,535	155	1,380	.56	
Ogdensburg.....	2,350	4,887	711	4,176	1.77	
Poughkeepsie..	3,702					2,746
Rochester.....	1,744	226		226	.12	
Utica.....	1,862	3,071	211	2,860	1.53	

PORK PRODUCTION OF THE STATE INSTITUTION FARMS FOR THE YEAR ENDING  
SEPTEMBER 30, 1913 (*Concluded*)

INSTITUTION	AVER- AGE DAILY POPULA- TION	TOTAL VALUE PORK PRODUCT	COST OF FEED NOT GARBAGE	VALUE OF PORK PRO- DUCED BY GARBAGE	VALUE PER CAPITA OF PORK PRO- DUCED BY GARBAGE	LOSS BY NOT KEEPING SWINE
<i>Hospitals</i>						
Ward's Island..	5,339	.....	.....	.....	.....	\$4,805
Willard.....	2,829	\$4,452	\$1,237	\$3,215	\$1.13	.....
Yorktown.....	89	764	1,173	†409	.....	.....
Total.....	37,670	\$32,490	\$4,654	\$27,836	.....	\$8,399
Average.....	.....	.....	.....	.....	\$0.73	.....
<i>Prisons</i>						
Auburn.....	1,329	.....	.....	.....	.....	\$1,196
Comstock.....	543	\$414	\$246	\$168	\$0.30	.....
Dannemora Prison.....	1,393	1,548	50	1,498	1.07	.....
Dannemora Hospital.....	610	635	11	624	1.02	.....
Matteawan.....	1,005	667	769	†102	.....	.....
Ossining*.....	1,281	.....	.....	.....	.....	.....
Valatie.....	30	595	445	150	5.00	.....
Wingdale.....	.....	.....	.....	.....	.....	.....
Total.....	6,191	\$3,859	\$1,521	\$2,338	.....	\$1,196
Average.....	.....	.....	.....	.....	\$0.37	.....
General total.	56,051	\$63,112	\$13,132	\$50,492	.....	\$10,521
Gen'l average	.....	.....	.....	.....	\$0.90	.....

† Loss. \* Not reported.

In the feeding of garbage, it is important that it be fed fresh and in clean troughs or on concrete feeding platforms, and that cans or barrels commonly used for handling this waste be kept in a sanitary condition. It has been reported that where ham or bacon and other pork products are purchased, the disease known as hog cholera has been traced to the meat rinds in the garbage. To overcome this danger, the garbage should be thoroughly cooked before feeding if it contains meat scraps in any form.

The use of hog cholera serum for the prevention of hog cholera is proving valuable in controlling this disease. How-

ever, it is essential that outbreaks be reported promptly, as the serum is a preventive rather than a cure.

The use of forage crops such as alfalfa, clover, rye, rape, soy beans and oats and peas is proving of considerable value in feeding brood sows and the growing herd. It adds much to their health and supplies considerable food. Several institutions have increased their production at a small expense by the use of forage crops. When the swine are on range the manure is evenly distributed, which adds fertility to the land.



FIG. 53.—SWINE ON FARM OF STATE AGRICULTURAL AND INDUSTRIAL SCHOOL, INDUSTRY, N. Y.

Hogs should be provided with pure water and shade during the summer months. The use of colony houses for the brood sows and the growing herd is proving practical. They are cheap, easily built, and can readily be moved to new fields and act as a check should an outbreak of hog cholera or other disease occur.

STATEMENT OF SWINE INDUSTRY FOR THE YEAR ENDING SEPTEMBER  
30, 1913, ON THE STATE CHARITABLE, HOSPITAL AND PRISON  
FARMS.

DR.		CR.	
INVENTORY BEGINNING FISCAL YEAR		INVENTORY ENDING FISCAL YEAR	
Number	Value	Number	Value
523 brood sows .....	\$11,880	521 brood sows .....	\$13,454
39 boars .....	861	50 boars .....	1,217
1,802 spring pigs.....	16,067	2,180 spring pigs .....	21,224
1,192 fall pigs.....	4,902	1,317 fall pigs .....	5,803
1,076 sows and stags.....	16,068	1,014 sows and stags.....	15,214
Total .....	<u>\$49,778</u>	Total .....	<u>\$56,912</u>

PRODUCTION			
Cost		Value	
Stock purchased .....	\$1,026	Stock sold .....	\$1,150
Feed purchased .....	9,615	550,150 lbs. pork produced	
Bedding purchased .....	1,432	@ 10c. ....	55,015
Field crops, home product..	3,638	Bones, etc., sold.....	8
Veterinary services .....	270	Manure .....	9,025
Labor .....	9,972	Total .....	<u>\$65,198</u>
Miscellaneous .....	186	Inventory .....	<u>56,912</u>
Total .....	<u>\$26,139</u>		
Inventory .....	49,778		
	<u>\$75,917</u>	Profit .....	<u>\$46,193</u>

It will be noted that our institutions, taken as a whole, produced 550,150 pounds of pork, valued at \$55,015, which is an average of ninety-eight cents' worth of pork per capita.

My observation of the swine industry on our state institution farms is that success does not depend so much upon the breed as it does upon the energy and management applied to the industry. There are good individuals of our principal breeds of swine on our state institution farms. Many of them are pure-breds, and the balance largely good grades with pure-bred boars to head the herds. The continued use of pure-bred boars and the selection of the choicest of the offspring for breeding stock are improving our herds each year.

DATA RELATIVE TO FEED, WEIGHT AND GAIN OF PIGS — INDICATING  
THE MOST PROFITABLE AGE FOR SLAUGHTER.

Average weight of pigs	Total number of experi- ments	Average feed eaten per day per pig	Feed eaten per 100 lbs. live weight	Average gain per day	Feed required for 1 lb. gain
Lbs.		Lbs.	Lbs.	Lbs.	Lbs.
38	41	2.23	5.95	.76	2.9
78	100	3.35	4.32	.85	4.0
128	119	4.79	3.75	1.10	4.3
174	107	5.91	3.43	1.24	4.8
226	72	6.57	2.01	1.33	5.0
271	46	7.40	2.74	1.46	5.1
320	19	7.50	2.53	1.40	5.3

The third column of table shows the average amount of feed consumed daily by pigs of different weight; we learn from it that pigs averaging 38 pounds consume 2.23 pounds of feed daily. As the animals increase in weight there is a gradual



FIG. 54.— SWINE ON FARM OF CRAIG COLONY FOR EPILEPTICS, SONYEA, N. Y.

increase in daily amount consumed, until we find the 320-pound hog eating 7.50 pounds per day, or over three times as much as the 38-pound pig.

In the fourth column it is shown that pigs weighing 38 pounds consume 5.95 pounds of feed per 100 pounds live weight, or about 6 per cent. of their live weight. As the pigs grow larger they consume less feed, until with hogs weighing 320 pounds the feed consumption per 100 pounds is but little more than 2 per cent. of live weight.

In the fifth column we have the average daily gain per pig. It is shown that the 38-pound pig gained .76 pound or 2 per cent. of its own weight per day; while the hog weighing 320 pounds gained 1.4 pounds per day, or a little less than one-half of 1 per cent. of its own weight per day.

In the last column we find data that is of vital importance to the feeder. The pigs weighing 38 pounds gained one pound on 2.9 pounds of feed. There is a gradual increase in number of pounds of feed to produce a pound gain until the hog weighing 320 pounds requires 5.3 pounds of feed for one pound of gain; this is nearly 2.5 pounds, or 82 per cent. more feed than that required by the 38-pound pig.

## HOME OR RETAIL MARKETING OF PORK PRODUCTS

EDWARD VAN ALSTYNE, KINDERHOOK, N. Y.

Director of Farmers' Institutes

Time was not so long ago when the farmers' pork barrel was supposed to be like the widow's cruise of oil — never failing. Pork fried or boiled was a staple article of diet. Undoubtedly this was well adapted to the needs of the pioneer farmer, or the man who was obliged to use his muscle rather than his brain, before the advent of present day labor-saving devices. Neither is salt pork to be depised when properly prepared by the skilled housewife.

On the other hand, as a daily article of diet, taken from the bodies of swine dressing well into the hundreds and served swimming in grease, which is not appetizing on a hot day, it is not surprising that such food helped to drive many a young person from the farm with a longing for "the flesh pots of Egypt," or their equivalent in some of the towns and cities of these latter days. What a change from that day to this — when on far too many farms the annual "butchering" with its attending spare ribs, sausage, tenderloin, lard, hams, etc., in addition to the traditional "side pork," is only a memory! The village butcher has become a regular visitor and the consumption of fresh meats of various kinds has materially increased among our rural population, often to the detriment of their health — always their pocketbooks. The equivalent of a bushel of potatoes or grain, 100 pounds of hay, 2 pounds of butter or a half can of milk, is taken to pay for enough meat for the ordinary family for a single meal. Most of that needed could better be supplied from the farm.

We hear much about the awful chasm between the producer and the consumer; yet some of those on the farms who sound this slogan loudest are sinners themselves in this respect (a sinner being one who misses the mark, according to the Greek derivation of the word). They are marketing their commodi-

ties — some of which were cited above — to customers many miles distant, and using their share of "the consumers' dollars" to supply themselves with pork products from Kansas City or Chicago, delivered to them by local retailers, instead of producing such on their own farms at first cost, and of the best quality.

I have written this somewhat lengthy introduction in order that, if possible, I may impress on my farmer readers the importance of following some of the suggestions given below, from the standpoint of true economy as well as that of supplying their tables with wholesome, appetizing articles of food, the latter being well outlined by Mrs. Harrington on page 187.

#### RETAILING PORK PRODUCTS

Where one is located near a large town and can devote some time to it, there is a good profit in selling the various parts of the carcass in the form of sausage, loins, spare ribs, headcheese, lard, etc., direct to consumers. In this way fully one-third more may be obtained than if the carcass is sold entire. This will afford a liberal compensation for the labor. The writer has always found village folks eager to avail themselves of the opportunity to secure these products at first hand. One can sell his surplus in this way each year; or, if he cares to make a specialty of this line of work, he may slaughter at frequent intervals all winter.

In such cases there should be convenient arrangements for butchering, such as a small steam boiler, which may also be used for cooking feed or heating milk, and can be purchased for about \$30. From this a pipe will carry live steam into the scalding vat, which should be of wood or concrete in the form of a long box, sloping at each end so that the hog can readily be drawn in and out. This is much more economical of fuel and time than a kettle slung between two crotched sticks and the half reclining barrel. The temperature of the water, which should always be determined with a thermometer, should be  $175^{\circ}$  for a pig, and from five to ten degrees higher for a mature hog. This will do away with "poor scalds." A couple of pounds of lime in the water will make it more adhesive, and make the skin much

whiter, although it is not quite so nice for the hands of the operator. A small gasoline engine may be useful for grinding sausage meat, as well as for other purposes.

#### CUTTING UP THE CARCASS

*Headcheese and lard.*— After the carcass has hung long enough to cool, remove the head just back of the ears — a little practice will soon show the point of easy severance. Then divide the head on the side at the jaws. Always use a saw so that there will be no bone chips in the headcheese, as there will be if a

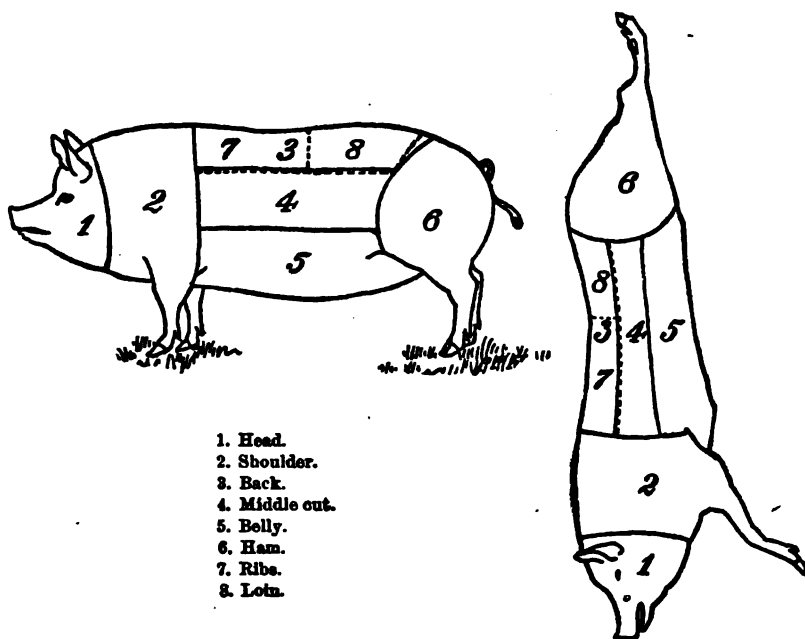


FIG. 55.— DIAGRAM SHOWING CUTS OF PORK.

cleaver or axe is used. Saw off the snout ahead of the eyes and divide the skull midway between the ears; the brains are then easily removed. With a small-bladed knife remove the eyes and ears. Place the pieces in a tub of cold water in which a couple of handfuls of fine salt has been dissolved and leave for twelve hours, when the blood will have been drawn out. We usually put these to soak the night after butchering. Wash, and singe

off all bristles, then boil until the meat freely leaves the bone. If the meat is chopped and all rinds removed, the headcheese will be as much superior to the ordinary article—full of rinds and the meat in chunks—as a tender, well broiled steak is superior to a tough fried one. Season and place the meat in cheesecloth through which the fat may be pressed out. This will be nearly as good as lard for many household purposes. Let the meat remain in the cloth and put in a pan under a compress, which will press out the remaining fat, leaving the meat in a nice “cheese.” Thinly sliced for supper or lunch, or fried brown for breakfast it is a dish for an epicure. It may be kept for several weeks if put in a jar or tub and covered with weak vinegar.

After finishing with the head, remove the leaf lard. This will help the carcass to cool through more quickly. The next

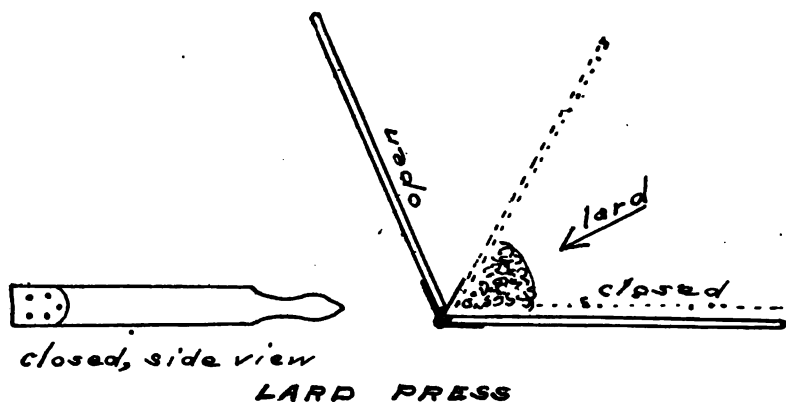


FIG. 56.—HOME-MADE LARD PRESS.

morning, cut in pieces, try out and strain through cheesecloth into convenient receptacles. A home made press, as shown in Fig. 56 will materially assist in squeezing out the fat.

*Hockeys and bacon.*—If for home use, or if very heavy pork, cut along each side of the backbone, using a saw for the same reason given above. The fat strip along the backbone can be used for salt pork, the trimmings of the bone for sausage, and the spinal column can be boiled with the headcheese. Cut a strip about three inches wide off the bellies for sausage, then cut across behind the shoulder and ahead of the hams and take out

the ribs, being careful to leave a smooth surface beneath. These are the old-fashioned "spare ribs." Cut the solid meat into three strips lengthwise, being careful to make them of equal width, as they pack better, besides having a much neater appearance. With pigs not too fat these strips will all make bacon. If from heavier hogs or very fat pigs the upper strip would better be used for salt pork. Saw off the leg close to the fleshy part of the ham, as it will improve the pig's foot or "hockey," but remaining on the ham it will dry up and be of little worth. After the toes and bony part of the leg are cut off, the leg bone should be sawed through, but the flesh not severed. Remove all bristles by singeing, then boil until a broom splint will readily penetrate the skin, place in a receptacle sufficiently large, and press out the fat as with the headcheese—no cloth being needed. The rinds from the headcheese and sausage may be cooked at the same time. After they are cold, the "hockeys" should be placed in weak vinegar. Many regard them highly as an article of diet, and there is a ready sale for them.

*Hams and how to cure them.*—Trim the hams neatly and closely, using one from the big packing houses as a sample. The trimmings will add to the sausage meat. The shoulders may be treated in the same way to be cured and smoked. It is better to remove the shoulder blades, fastening the meat together with a cord and skewers, and, as they become hard and tough if kept any length of time, they should always be used early in the season. Such are sold as "California hams" in our markets. When the shoulders are not needed for home use, it is better to cut them into sausage meat.

After the meat is thoroughly cold, rub the fleshy part with molasses. A shallow pan in which the flat of the hand can be dipped is a very convenient receptacle for this purpose. If the room or weather is very cold, it is wise first to warm the molasses slightly. Have ready a mixture of 4 quarts of fine salt,  $\frac{1}{2}$  pound of black pepper, and 10 ounces of saltpeter (this is sufficient for ten good sized hams or its equivalent in bacon). Rub this thoroughly into the meat, being careful to fill in about the bone and hock. Place the hams in a clean cask, hock up, and the bacon on edge. For family use it may be placed on top of the

hams. Let the meat stand three days, then cover with a brine made in the following proportions: to 6 gallons of water add 8 pounds of rock salt, 2 pounds of brown sugar (or 1 quart of molasses) and 2 ounces of saltpeter; boil until no scum rises, skimming as it boils. Never put this brine on the meat until it is cold. (This brine may be reboiled and used again for hams or beef.)

After standing in this brine for ten days (or two weeks if the hams are large) hang the meat in the smokehouse and smoke about four times, using corncobs, hickory or maple wood. Never make a hot fire or a prolonged smoke. If the smokehouse is tight and free from flies the meat may remain there all summer in good condition. It is wise after smoking to wash the fleshy parts with vinegar, then cover with whitewash, wrap in manilla paper and hang it in a dry, cool place away from flies. I do not like the old way of packing in oats, as they are quite sure to attract mice.

This method of curing hams has been in my family for over fifty years and many of my friends have used it. I have never eaten smoked meats which were better — seldom any so good.

*Side pork.*—With heavy carcasses — particularly where one wishes to sell the meat — it is better after removing the tenderloin to split the carcass through the center of the backbone; amateurs would better use a saw while the carcass is suspended. After dividing, make another cut about eight inches from the upper side. These pieces can be sold as loin, either with the fat and rind on or trimmed off. If not trimmed, the price should be from two to three cents a pound less, depending on the amount of fat. Cut the sides into pieces six inches wide and eight long. This will make "bone side pork." Or, the ribs can be removed as above, making "clean" or "solid pork." Unless the hogs are very fat, it is better to use the lower strip for bacon, as it brings more money that way. Always remove a strip from the belly for sausage, if the best bacon is desired. Spread the meat in a clean cool place until it is thoroughly cooled through; for twelve hours at least.

It is very important never to use a vessel for pork which has previously contained anything else. A cask which has held pork

may be used for beef, but never the reverse. In using a wooden vessel after the first time it should be thoroughly scalded — steaming is still better — then placed over a quick fire of cobs or clean hay for a few minutes, being careful not to burn it, and it will be as sweet as when it was new. There is no receptacle so good for this purpose as a stone crock or jar.

Cover the bottom with the best clean rock salt, then place the pieces of pork on edge with the rind toward the outside, packing closely until the layer is full. (The advantage of pieces of equal width is now apparent.) Cover with a liberal layer of salt, then another layer of pork and salt until the vessel is full or the pork exhausted. Weight the meat in order that none of it comes above the brine. With the same kind of salt make a brine strong enough to float an egg or a potato the size of an egg, and pour this over the meat until there is at least an inch of brine over the surface. It may be necessary to add to the brine after twenty-four hours if it is absorbed by, or sinks between the meat. Never let any pork protrude above the brine. Always use the purest water, and only rock salt; if there is any question concerning the water, boil it. In that case do not put it on the meat until the brine is cold.

It should be unnecessary to say that the hands of the operator should be clean. If one expects to sell the pork by the barrel, weigh the meat before salting; 184 pounds will make a barrel — 200 pounds — of salt pork. The writer has packed carcasses in this way when the price was very low and sold the salt pork the next season by the barrel or pound to local trade at a profitable advance.

*Sausage.*— Cut the meat designed for this purpose into strips, as suggested above, using care to remove any bone or gristle. Mix the fat and lean pieces in due proportion before grinding; grind fine, season with  $\frac{3}{4}$  of a pound of salt and  $\frac{1}{4}$  of black pepper to each 50 pounds of meat, distributing it thoroughly.

To the writer's mind there is no sausage so good as that in casings. In these days those like-minded will find it easier to purchase the casings from packers, rather than to clean and prepare them, as was the custom in my boyhood. However, as the use of casing necessitates a "stuffer," which is no longer com-

mon on our farms, the meat may be tightly pressed in pans and covered with some of the fat from the meat as above. This will keep it very well for a couple of weeks.

Another way is to use slim bags of heavy muslin, covered with paraffine. From these the sausage can easily be cut into round cakes. If one can secure a number of glass jars with straight sides and pack the meat in these, covering the top with paraffine before putting on the cover, he will find no better way of keeping sausage. When ready to use, place the jar in hot water and the meat will come out in form ready for slicing. This is an excellent way in which to retail it for family trade, using jars of one, two, or three pounds.

If the sausage is made of all sorts of material from the carcass, all of it coarsely chopped and very fat, it will be a product similar to much of that on the market and no one will be anxious to use it. If, on the other hand, the meat is selected and prepared as above, it will be an article which people will be eager to secure and for which they will gladly pay a premium.

*Liverwurst.*—This is a Dutch dish unknown to those not to the manor born, but well worth their notice. The name means "liver sausage." It is made as follows: with an ordinary sized liver boil a pound of salt pork until it is thoroughly cooked; while still warm, chop fine and put in cheese and press in a pan as with headcheese. It can be served cold, in slices, or warm as a stew.

*Scrapple.*—This is a southern dish, usually accompanied on our bills of fare by the adjective "Philadelphia." As many enjoy it, and as those from the region to the south are glad to buy it when they have migrated northward, I give a recipe for making it: prepare a pig's head as for headcheese; after boiling until the flesh leaves the bones, chop fine. Set aside the liquor in which the meat was boiled, until cold; remove the cake of fat from the surface and return the liquor to the fire. When it boils put in the chopped meat, and season well with pepper and salt. Let it boil again and thicken with cornmeal as for cornmeal mush. Let it work through the fingers to prevent lumps. Cook one hour, stirring constantly at first, afterward putting back on the stove where it will boil gently. When done pour into a pan not

too deep and mold. In cold weather this can be kept several weeks. Slice and fry brown in butter or drippings.

In these ways the table can be supplied with a variety of nutritious, appetizing pork products, some of them a necessary part of an average family's supply — all of the best and purest and produced on the farm at a minimum cost. As suggested at the outset, when properly prepared they find a ready sale in a market which returns to the seller 100 per cent. of the consumer's dollar.

## MARKET TYPES AND MARKETING

R. S. STACY

Hog Department, Rice & Whaley Co., Live Stock Commission Dealers,  
East Buffalo, N. Y.

### INSUFFICIENT MEAT SUPPLY

There never was a time in the history of our country when inducements to raise swine were so attractive as they are at present, made so by the fact that the supply is falling short of the demand, or, in other words, the production is not keeping pace with the consumption. Why more of the farmers of the Empire State do not turn to this industry is about as inexplicable as why each farmer does not raise a calf or a lamb every year, if his object is to make money.



The language of the late Grover Cleveland, that we are confronted with a condition, not a theory, is true in meat food supplies today. The present high price of meats is destined to continue until production very materially increases. Consumption, even though restricted by existing high prices, will in the long run decrease but little, because of the fast increasing population. It will be a long time before prices for swine and other meat animals will reach a level where it will not pay to produce them. The volume of business done in pork and pork products exceeds largely that of any other division of the trade. In addition to the local demand swine products find ready sale in foreign countries, and the steady and regular demand for live swine is absolutely certain. With this increasing demand year after year the raiser of swine can rest assured that he will always have a ready and dependable outlet for this product, when ready for market, at profitable prices.

While pork is called "the workingman's friend," there are very few people, rich or poor, who, if hungry, do not enjoy a nice

piece of ham either hot or cold, a good old-fashioned sparerib, a juicy pork chop, a nice piece of breakfast bacon, a good piece of sugar cured shoulder, pork sausage, and a hundred and one other things, including salt pork. The latter, laughed at by many, is at the same time a dish that is relished now and then by every one, and which, along with baked potatoes and milk gravy, makes a meal good enough for a king.

#### SUBSTANTIAL MARGIN OF PROFIT AT LESS THAN PRESENT PRICES

Swine are especially profitable to raise, not only on account of their maturing quick, but by reason of the fact that they thrive and do well on refuse around a farm that otherwise would go to waste. As a rule, a good thrifty sow will raise two litters of at least seven pigs per year; in fact, seven head is a low average, for a good brood sow should farrow and raise at least twenty pigs per year. At present prices, or even at two dollars per hundred weight lower, there is no crop, in my estimation, that a farmer can grow and put on the market that will make the money that swine will, especially when we take into consideration that prices for good swine on the Buffalo market have averaged better than \$8 per hundred weight for the past five years. The foundation for the substantial success of any packing plant rests with its pork end.

On account of its high percentage of dressing qualities compared with other meat animals, the saying that all that is lost in slaughtering a hog is its squeal, is quite true. The small waste in preparing for table, the drippings from cooking taking the place of butter in a good many cases, and the fact that lard is universally used the world over, are the factors that will always cause a good demand for swine, and they can be turned into money whenever ready for market.

The Western farmer, to be sure, has his swine following cattle, (if he did not he would be unable to fatten his cattle at a profit) but we must bear in mind that he is raising them on land that on an average is considerably more valuable than the farm lands of the Empire and Eastern states, and if under these conditions the Western farmer can make money, why cannot the farmers of this great state do the same—especially so when they are

right next to the best market in the country, Buffalo, where high freight rates and other heavy charges are eliminated.

#### DESIRABLE WEIGHTS AND GRADES

The class, or classes, of swine that command the best prices vary as to seasons and other conditions; offhand, I should say the 160- to 190-pound hog is the most profitable. If I were raising swine, I should make it a point to turn them into money as soon as possible and have others coming on in their place. These weights can be produced in a comparatively short time, and the demand for such weights is generally good.

On the East Buffalo, as well as on every other market, there is a name for each grade or weight. At Buffalo, hogs weighing from 100 to 120 pounds average are classed as "pigs;" from 120 to 140 as "lights;" from 140 to 180 as "yorkers;" from 160 to 200 as "mixed;" from 200 to 230 as "mediums," and those weighing 230 and upwards as "heavy." (Some years back these weights ran considerably higher, but of late years the tendency is not so much for the extremely heavy hogs.) "Stags" and "boars" are the same as their names imply; "roughs" are made up of two classes, sows with large ragged bellies, showing that they have been mothers, and second pregnant sows. It is surprising that with such favorable conditions farmers will sell swine of this nature, but we do receive a number of them in the course of the year.

Roughs, stags and boars command the best price when fat, and well finished.

To command the best prices, pigs and lights, should not be fat and chunky; neither should they be large and thin. If the latter, their killing qualities will not be good, and if the former, their selling qualities dressed will not be good, as they are used fresh: consequently, swine of these grades should be young and carry a reasonable amount of flesh, or, in other words, be well covered. The same may be said of yorkers, as a number of these grades are used fresh, but as a rule, they should be better finished than pigs and lights. Mixed, medium and heavy should be finished and show high dressing qualities. Buyers of the different grades, as a rule, prefer swine that will make the most percentage

in weight in the carcass, especially so on the heavier grades; but with pigs and lights, while they like to have them reasonably light shrinkers, prefer having them shrink a little heavy than to have them real fat and light shrinkers.

The bulk of the pigs are taken by slaughterers in New York City and vicinity, and are cut up on the block, fresh. Yorkers are also sent to New York City and other eastern points, and are also used to no little extent by local and eastern packers. The mixed, medium and heavy are packer grades, used not only by local but also by packers of eastern points. There are times when one particular grade, or weight, will command a higher price than another; as a general rule the lighter weights sell better during the warm months, and the heavier grades during the fall and winter months, but there are exceptions, and much depends upon whether swine coming to market are in a finished condition, and whether the receipts run largely to heavy or light weights. It goes without saying that whichever is the most plentiful sells at the lower price, so the reader will readily understand that, as a rule, weights govern prices.

#### SALESMAN AND SELLING QUALITIES

To be a success a salesman must know his buyer and must know how the buyer or buyers are sorting; he also must be able to tell at a glance the probable average in weight of the swine he is selling and their quality, whether good, fair or bad. Of course, this all comes in time to a good judge and trader, but many times a good judge does not make a successful salesman for the simple reason that he has not the trading qualifications; so a successful salesman must be both a good judge and a good trader.

Ofttimes there is a demand for pigs weighing under 100 pounds average and they sell at tempting prices, but ordinarily I should not advise marketing them under 160 pounds, providing they were in a thriving condition. A good thrifty pig gains in weight very fast, and, undoubtedly, the most profitable period for the feeder is between 100 and 160 pounds.

Generally speaking, there are two distinct types of swine, the lard and the bacon. Some of the several different breeds are better adapted for one type than others. For general market purposes I should adhere to the following rule: choose swine

of good quality. (Quality is of great importance in swine as all other animals). This is shown to a great extent in the condition of the hair and size of the bone. There should be a plentiful coat of hair, neither very fine nor very coarse; if the latter with heavy bristles along the back, it indicates a coarse grain and low killing grade; if very fine, it indicates a lack of constitutional vigor. Coarse hair naturally goes with coarse bones. A bone of fair size, yet not too coarse, is especially desirable. As too small a bone gives poor support, swine of this type are quite apt to arrive at the market either crippled or nearly so and consequently prove poor sellers. I should choose a breed with plenty of size and bone, without coarseness, and should select for uniformity and smoothness, avoiding wrinkles and creases about the neck, shoulder and side. The animal should stand up strong on its toes, which indicates its ability to carry weight well. It should have a short head and reasonably short neck; sides fairly deep; wide back; clean, straight belly; thick, deep loins; legs short and straight, but not coarse. Then the next, but not the least important, would be in securing sows of this type that would farrow good-sized litters and be capable of taking care of them.

My knowledge of swine has been gained mostly on the open market, and from coming into contact with large feeders and shippers throughout the middle West. The percentage of pure bred swine coming to market is probably very small, but we do receive any number which show good breeding and which are, no doubt, from high grade stock or are a cross of the different breeds, and as a rule the quality of swine runs much better than the quality of other meat animals.

I cannot close without calling your attention to the fact that back in 1896 the farmers of Kansas were asking, "What is the matter with Kansas?" The Hon. W. A. White answered, "Raise more hogs and less hell." It seems that the farmers proceeded to raise hogs and forgot hell with the result that mortgages were paid off and bank deposits grew larger. The farmers of the Empire State are orderly people, and therefore the latter part of White's advice does not apply to them, but the first, "raise more hogs," certainly does, if they wish to improve their bank account.

## PORK PRODUCTS AS A FOOD

IDA S. HARRINGTON, ROCHESTER, N. Y.

Farmers' Institute Lecturer

In the olden days of "merrie England" no Christmas dinner was thought complete without the historic boar's-head. It occupied the same undisputed place in the meal that the turkey holds in an American Thanksgiving dinner. Boar's-head was considered indispensable, partly because it was a yearly rite to sacrifice a boar to Freyr, the Scandinavian god of peace and plenty, whose festival occurred at the same time as Christmas. It is doubtful, however, whether the rite would have been so strictly observed if people had not regarded boar's head as the finest possible dish for the Christmas feast. Its appeal to the appetites of those days is shown by the frequent use of the name "Boar's Head" by old-time eating-houses and inns.

Pork in all its varieties had a popularity then which it does not enjoy today. It met a need of the times when men "lived in houses of reed and had constitutions of oak." Its high proportion of fat was a body fuel much needed by dwellers in the cold, draughty houses of the period, and its demands on the digestive powers did not trouble those who had "constitutions of oak." Today, when men "live in houses of oak and have constitutions of reed," the overheated atmosphere with which they surround themselves makes the problem of feeding those members of the family who spend much time indoors a hot-weather problem all the year round. To eat freely of heat-producing food under such conditions results in discomfort, and we accordingly brand as "unwholesome" a food which under right conditions is as valuable today as it ever was.

Whether an article of diet is to be beneficial or harmful depends no less on the environment, condition and needs of those whose means we are planning than on the quality and preparation of the food we set before them. An instinct of self preservation has been teaching the dwellers in steam-heated city flats who work all day in steam-heated offices to eat more and more sparingly of pork

products. Rarely is pork seen on such tables except perhaps in the form of thinly cut ham or crisp bacon. But those who are so fortunate as to have their work take them constantly out of doors, and who have the tonic of frequent battles with winter winds, have a far wider range of choice in their dietary. For them, pork in any form, if of high quality and carefully cooked, is of distinct value.

Atwater gives the following tables showing the composition of pork as purchased:

	Refuse %	Water %	Protein %	Fat %		Value fu per lb Calori
Ham .....	14.4	34.9	13.3	33.4	.4	1,65
Loin .....	15.8	43.8	14.1	25.6	.7	1,34
Bacon .....	.8	16.8	9.2	61.8	4.2	2,78

There is a larger proportion of meat to bone in pork than in either beef or mutton; and, while the percentage of protein is lower in pork, it contains more fat and, as a consequence, less water than other meats.

The modern distrust of pork, due to a natural doubt as to whether an animal bred in unclean places and fed on refuse can be made safe or palatable as a food, will cease when a general adoption of clean housing and proper feeding of swine produces pork which scores high in all of the following points: the fat should be very white, clean and free from any greyish tint; the lean should be pale rose color, juicy, firm and fine grained; the skin should be thin, clear and smooth; there should be no definable odor; the flavor should be fine and sweet, and in the young animal nearly as delicate as chicken.

#### COOKING OF FRESH PORK

To develop the full possibilities of a choice cut of pork requires more than ordinary care in cooking. Careless preparation may render the most carefully grown pork unwholesome. This is especially true of fresh pork. The rules by which we successfully roast other meats must be cast aside in the case of pork. Putting it into a quick oven and allowing the outside to become seared and thus prevent the heat from penetrating to the heart of the roast would result in an underdone product that would overta

the strongest digestion. In roasting pork, contrary to the rule for other meats, the oven should be kept very moderate, and we should allow twenty-five minutes for the cooking of every pound, instead of the ten or twelve minutes per pound which produces an ideal roast of beef.

The cuts used as fresh pork include the loin, spareribs, chops, hams and shoulders, although the last two are much oftener salted and smoked. Pork steaks, while they are best from the loin, may also be cut from the neck. Pork stew may be made of lean slices from the leg. The custom of serving apple sauce, tomato catsup or pickles with pork fulfills a natural craving of the appetite for an acid to counteract the high fat content of pork, and should therefore not be omitted.

#### HAM AND BACON

The upper part of the hind legs (hams) and the flanks of the young animals (bacon), if properly salted and smoked, are thereby made more wholesome than fresh pork if we do not by too prolonged cooking toughen the fibre and make it less digestible. For frying and broiling, ham should be cut thin. If very salt, let it stand in boiling water for ten minutes. Then drain, and broil over bright coals or cook in a hot frying pan for not more than five minutes, turning several times. Bacon is best sliced with a dried-beef cutter, since in no other way is it possible to cut it so thin. It contains nearly as much protein as other meats and two or three times as much fat, and when carefully prepared is easily digested. This is the only form of pork which is safe to give young children. During preparation it is well if possible to have the bacon very cold so that the fat will be firm and hard. Lay the slices in a hot frying pan, turn them as soon as the fat looks clear, and, after cooking for not more than three minutes in all, drain them on soft paper. In frying a quantity, do not allow the fat that is tried out to remain in the pan and make the bacon soggy and fatsoaked. Pour it off into a convenient receptacle as fast as it collects and save it for frying potatoes, etc.

#### LARD

"Pure leaf lard" is obtained only from the large triangle of fat which lies at the back of the abdominal cavity, but there is

little actual difference in the composition of this and the lard obtained from the fatty portions lying under the skin. Many of the commercial substitutes which are said to excel lard are in reality compounds of lard and cottonseed or other vegetable oils. Lard supposedly contains no water (this is not always true of the commercial product) and has therefore greater shortening power than either butter or oleomargarine. The cost in time and labor of making our lard at home is offset if we thereby secure a product that is free from water and impurities.

#### COOKING HAM IN A FIRELESS COOKER

Scrub the ham thoroughly with a brush, then allow it to soak for several hours. To cook, cover it with cold water, bring slowly to the boiling point and let it cook slowly for half or three quarters of an hour, according to the size. Then transfer it, closely covered, to the fireless cooker and leave it over night. In the morning remove the skin, sprinkle the ham with a mixture of sugar and breadcrumbs and brown in the oven.

#### COOKING OF SAUSAGES

To have link sausages come to the table uniform in shape and evenly browned, prick them with a fork, simmer them in boiling water fifteen minutes, and then put them into the frying pan, only long enough to brown both sides. Substituting sausages for salt pork in a dish of baked beans makes an agreeable change, and does also the substituting of dried split peas or lentils with salt pork in place of beans.

#### PORK AND BEANS

While this dish is popular wherever people require and relish hearty food, it is interesting to note the different ideas that are held concerning it in different sections. We in New York for instance, always speak of it as "pork and beans," giving all the prominence to the pork; and if our helping of pork is scanty, we feel that we have been deprived of our rightful allowance of protein food. The index of any cook book written by a New Yorker puts pork and beans under the heading of "pork." In New England, famous for its "Boston baked beans," the pork is considered secondary and the dish is always listed under "beans."

The latter idea is the more correct one, for, unlike most combinations of meat and vegetables, it is the beans, not the pork, that furnish most of the protein. Pork is a necessary addition because it supplies the fat which beans so greatly lack, and because it adds to the palatability of the dish; but a pound of beans furnishes twice as much protein as a pound of fat salt pork. Beans should therefore be regarded rather as a meat substitute than as a vegetable. When there is digestive disturbance after the eating of pork and beans, and the pork is blamed, it is more often due to the fact that the dish of pork and beans has been added to a meal already rich in meat. It may also be that the beans, rather than the pork, have been insufficiently cooked, or have been cooked in hard water. The heaviest tax on the digestive organs after a meal of pork and beans is caused by the skin of the bean which contains a large amount of cellulose. In hard water this is not softened. A pinch of baking-soda added to the water in which beans are boiled softens and loosens the skins so that they may, if desired, be rubbed off in cold water. Whether or not we prefer the flavor of pork and beans cooked according to the New England method, we must admit that the prolonged cooking (six to eight hours) results in a more easily digested dish than its New York namesake. The ingredients used are practically the same.

- 1 quart pea beans
- $\frac{1}{2}$  to 1 pound salt pork
- 1 tablespoon salt
- 4 tablespoons sugar or molasses, or
- 1 tablespoon molasses and 3 tablespoons sugar
- $\frac{1}{2}$  tablespoon mustard

Put the beans to soak over night in cold or luke-warm water. In the morning drain, cover with fresh cold water, heat slowly, and boil gently until they are tender when tested with a darning-needle. If the water is hard, add a pinch of baking-soda, changing to clear water after twenty to thirty minutes. Scald, scrape, and score the rind of the pork. Put a thin slice of pork in the bottom of the bean pot, add half the beans then the rest of the pork and finally the remainder of the beans, the seasonings and one cup of boiling water. Bake in a covered bean pot in the oven for seven hours, remove the cover and bake for another hour. Add a little water from time to time as it cooks away.

## NEW YORK PORK AND BEANS

Use the same ingredients. Parboil the pork and score the rind. Half-bury the pork in a deep dish of beans which have been soaked and boiled as above, add a very little water and bake, uncovered, until well browned.

## USING LEFT-OVER PORK

The "Cook book of left-overs" by Clarke and Rulon, in its chapter on the uses of left-over pork, gives the following recipe which may be found helpful, since the most careful housewife at times fails to achieve that state of "four in the family and none to brag!" which a certain cook scorned as a proof of stinginess.

*Pork with fried apples.* Cut cold roast pork into small pieces. Thin the left-over gravy with a little hot water, adding seasoning if necessary. Let it boil for a few minutes in a frying pan. Add the meat, heat thoroughly, but do not allow the sauce to boil. Serve with apples prepared as follows: core three or four Baldwin apples without removing the skin. Cut into slices half an inch thick, and cook in hot bacon fat until soft and well browned. Drain on soft paper.

*Baked ham and eggs.* Butter a shallow baking dish and sprinkle two tablespoonfuls of soft, well buttered breadcrumbs on the bottom. Add one cup of cooked ham, chopped, and one quarter cup of hot milk. Break on top the number of eggs desired. Season and sprinkle with a few fine white crumbs, well buttered. Bake until the eggs are sufficiently cooked. Serve in the baking dish.

*Mock chicken salad.* Cut any cold fresh pork in pieces suitable for salad. To two cups of such meat add three tablespoonfuls of hot vinegar and set away to get very cold. When ready to prepare the salad, drain off any of the vinegar remaining, add one and one half cups of celery cut in small pieces and pour over all a cooked salad dressing.

It is suggestive of the contempt in which pork is held that this salad would find little favor under its own name, although its excellence can not be questioned.

## OTHER EDIBLE PORK PRODUCTS

The statement that pork packers use every part of the pig "except the squeal" seems very probable when we read, especially in the older cook books, some of the many dishes which the home cook may prepare from pork. The liver, heart and head may be stewed together accompanied by force meat balls made from the brains. Head, ears and tongue are together made into head cheese, while head, feet and ears are combined to make brawn. Feet and ears may be pickled or "couced" as follows:

## SOUSE OF PIGS' EARS AND FEET

Clean the feet and ears well; cover them with cold water slightly salted, and boil until tender. Pack in stone jars while hot, and cover while you make ready the pickle. To half a gallon of good cider vinegar allow half a cup of white sugar, three dozen whole black peppers, a dozen blades of mace and a dozen cloves. Boil this one minute, taking care that it really boils and pour while hot over the still warm feet and ears. It will be ready to use in two days and will keep in a cool, dry place two months.

If you wish it for breakfast, make a batter of one egg, one cup of milk, salt to taste and a teaspoonful of butter, with enough flour for a thin muffin batter; dip each piece in this, and fry in hot lard or drippings. Or, dip each in beaten egg, then in pounded cracker before frying. Souse is also good eaten cold, especially the feet.

Although roast pig's-head may not appeal to present day palates, it may be interesting to conclude with the directions for a dish that our forefathers so greatly relished.

## ROASTED PIG'S HEAD

Marion Harland

Take the head of a half grown pig; clean and split it, taking out the brains and setting these aside in a cool place. Parboil the head in salted water, drain, wipe the head dry and wash all over with beaten egg; dredge thickly with bread crumbs seasoned with pepper, sage and onion, and roast, basting twice with butter and water, then with the liquor in which the head was boiled and

last with the gravy that runs from the meat. Wash the brains in several waters until they are white; beat to a smooth paste, add one-quarter part fine breadcrumbs, pepper and salt; make into balls, binding with a beaten egg; roll in flour and fry in hot fat to a light brown. Arrange about the head when it is dished. Skim the gravy left in the dripping pan, thicken it with brown flour, add the juice of a lemon and boil up once. Pour it over the head.



STATISTICS RELATIVE TO SWINE IN NEW YORK STATE

(Taken from U. S. Census, 1910)

COUNTY	Number Mature Hogs	Number Spring Pigs	Total Number	Total Value
Albany .....	7, 734	5, 873	13, 607	\$114, 443
Allegany .....	8, 265	5, 797	14, 062	127, 481
Broome .....	4, 208	3, 407	7, 615	67, 974
Cattaraugus .....	10, 600	7, 254	17, 854	169, 018
Cayuga .....	12, 388	10, 147	22, 535	187, 448
Chautauqua .....	10, 531	10, 226	20, 757	192, 366
Chemung .....	2, 293	1, 806	4, 099	34, 363
Chenango .....	3, 664	2, 663	6, 327	62, 941
Clinton .....	6, 862	4, 701	11, 563	121, 003
Columbia .....	6, 460	6, 631	13, 091	104, 839
Cortland .....	2, 852	2, 381	5, 233	43, 801
Delaware .....	5, 868	4, 658	10, 526	102, 279
Dutchess .....	9, 209	10, 589	19, 798	147, 447
Erie .....	14, 136	9, 228	23, 364	203, 783
Essex .....	2, 996	1, 953	4, 949	47, 922
Franklin .....	7, 026	5, 867	12, 893	112, 525
Fulton .....	2, 519	1, 825	4, 344	38, 471
Genesee .....	7, 431	5, 339	12, 770	124, 064
Greene .....	3, 681	4, 564	8, 245	73, 005
Hamilton .....	308	69	377	3, 811
Herkimer .....	4, 916	4, 838	9, 754	89, 073
Jefferson .....	10, 499	9, 319	19, 818	180, 134
Kings .....	15	.....	15	105
Lewis .....	6, 936	5, 320	12, 256	102, 790
Livingston .....	8, 284	4, 947	13, 231	123, 582
Madison .....	4, 602	3, 148	7, 750	78, 083
Monroe .....	11, 356	10, 430	21, 786	200, 058
Montgomery .....	4, 944	4, 154	9, 098	74, 709
Nassau .....	1, 520	1, 178	2, 698	20, 446
New York .....	576	170	746	4, 734
Niagara .....	9, 248	8, 254	17, 502	151, 312
Oneida .....	9, 126	9, 535	18, 661	181, 181
Onondaga .....	12, 147	9, 306	21, 453	191, 052
Ontario .....	9, 934	7, 101	17, 035	168, 250
Orange .....	4, 477	4, 361	8, 838	72, 448
Orleans .....	6, 063	4, 897	10, 960	102, 022
Oswego .....	7, 853	5, 995	13, 848	121, 603
Otsego .....	7, 467	6, 635	14, 102	129, 347
Putnam .....	1, 264	1, 128	2, 392	17, 590
Queens .....	515	313	828	6, 732
Rensselaer .....	6, 068	6, 013	12, 081	98, 345
Richmond .....	292	420	712	6, 117
Rockland .....	698	502	1, 200	9, 311
St. Lawrence .....	16, 537	17, 398	33, 935	289, 789
Saratoga .....	5, 068	5, 544	10, 612	87, 577
Schenectady .....	1, 450	1, 493	2, 952	25, 844

## STATISTICS RELATIVE TO SWINE IN NEW YORK STATE—Continued

COUNTY	Number Mature Hogs	Number Spring Pigs	Total Number	Total Value
Schoharie .....	5,438	4,207	9,645	\$85,923
Schuyler .....	2,774	2,627	5,401	44,185
Seneca .....	6,081	3,751	9,832	88,980
Steuben .....	10,731	7,009	17,740	154,381
Suffolk .....	5,979	3,966	9,945	83,892
Sullivan .....	4,564	2,898	7,462	63,843
Tioga .....	2,381	2,251	4,632	45,953
Tompkins .....	4,728	4,200	8,928	75,650
Ulster .....	7,385	7,458	14,843	109,186
Warren .....	1,423	647	2,070	21,462
Washington .....	6,497	6,362	12,859	105,056
Wayne .....	11,112	9,637	20,749	183,360
Westchester .....	3,590	1,840	5,430	53,466
Wyoming .....	6,258	4,229	10,487	103,814
Yates .....	4,530	3,345	7,884	74,303
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The State .....	364,375	301,804	666,179	5,905,272
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FIG. 57.— ROBERT P. TRASK.

STATE OF NEW YORK  
DEPARTMENT OF AGRICULTURE

CALVIN J. HUSON, Commissioner

Bulletin 65

The Poultry Industry in New York State

Issued by the Bureau of Farmers' Institutes and Compiled under the  
Supervision of the Director



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## INTRODUCTION

"Poultry" is the subject, above all others, that is most called for on Institute programs — the one most certain to interest the greatest number of people. This is easily understood when we realize that through poultry a love for domestic animals and the farm is engendered in hundreds of young people, and that from poultry raising many obtain the first money earned.

Not a few people in villages and small towns, who have no other interest in farm matters, are vitally interested in "chickens," and on nearly every farm, whether a general or special line of agriculture is followed, poultry is a part of the equipment — frequently a very profitable one.

In nearly every community there are poultry specialists who devote their entire time to the business — sometimes their entire farms — either in supplying the market with eggs and dressed poultry, or specializing as breeders of one or more of the popular breeds. Then too, there is the fancier, whose chief business it is to exhibit at the various fairs, and breed for "points." All are equally important in making up a great industry.

The value of eggs in 1909 was \$17,102,000, and that of fowls, \$8,403,000.

No industry is more attractive than poultry raising since the initial investment may be exceedingly small — an old hen or a setting of eggs. And many a successful poultryman has started from such small beginnings. But to what enormous proportions may it grow if the words and figures of the enthusiasts or the vendor of some particular breed or device are to be taken at their face value! Considering these facts it is not strange that one may look abroad and see abandoned poultry plants — monuments to those who began to build without counting the cost; who looked only at the pleasing side of the picture, and never at the obstacles and difficulties which are always to be met in any enterprise, and which when anticipated are already half conquered; who, with no practical knowledge or experience, listened to the

marvelous tales of "success" of others and thought they had only to read poultry literature, or at most take a short course in poultry raising in one of our agricultural schools, then invest their money, and gather eggs and shekels. Notwithstanding all this, there are many who are making a financial success of the business, which success has come because of attention to many details and knowledge acquired in the hard school of experience.

To serve all of these classes this bulletin has been prepared and is being sent out. We have endeavored to set forth the foundation principles of breeding, care, housing, feeding and incubation, with sketches of the different breeds and their characteristics, followed by a chapter each on ducks, geese, turkeys, guineas and pigeons.

The contributors are from all classes interested — the farm man and women, the specialist, the breeder, the fancier, and the experts from our colleges and experiment stations, who from the depths of their experience and most careful research, write of their conclusions. Only through the contributions of these busy men and women has this bulletin been made possible. They have given of their best, and in the majority of cases without pecuniary reward.

From its inception the compiler has had the assistance of Mr. Robert S. Trask, who arranged the table of contents, selected many of the contributors and reviewed the manuscript, beside writing three of the leading articles. For all such assistance he would express his indebtedness.

As this bulletin goes forth just after the Thanksgiving season, we trust it may be found helpful, and therefore an added source of thanksgiving to the many to whom it shall go, because in its pages may be found the experience of practical folk expressed in plain terms which may serve as a help to the many engaged in the poultry business.

## THE MINORCA

MRS. GEORGE E. MONROE, DRYDEN, N. Y.

Farmers' Institute Lecturer



It is certainly known of the Minorca that it has been an established breed for more than seventy-five years. As far back as we have any trace their great laying qualities have been the leading characteristic to commend them to breeders.

"They lay larger eggs and more of them than any other fowls" has so long and frequently been said of them as to seem a part of their very name, and the saying is too well sustained by actual proof to be successfully disputed.

### BLACK MINORCAS

Black Minorcas are unique among the fancy breeds of poultry in having been bred so long and their original type so well preserved. Popular favor has always clung to the Minorcas as egg-producing fowls, wherever they have been known. Besides the



FIG. 58.—WHITE MINORCA S. C. PULLET, "LADY IVORY," FIRST PRIZE, MADISON SQUARE GARDEN. BRED BY H. J. TEETZ, GLOVERSVILLE, N. Y.

great number and great size of their eggs, they have the largest bodies of all the non-setting breeds.

They undoubtedly came from the Isle of Minorca in the Mediterranean; it is certainly known that they were bred in England as early as 1834, for many years being bred for utility only. But they are in great favor with English fanciers now and have been for forty years. In the English show room they are among the most prominent and attractive features.



FIG. 59.—WHITE MINORCA S. C. COCK. FIRST PRIZE, MADISON SQUARE GARDEN. BRED BY H. J. TEETZ, GLOVERSVILLE, N. Y.

When the reputation of the wonderful beauty and wonderful eggs of the Minorca reached America, our fanciers began to give them attention and import them. It soon became impossible to supply the demand for hatching eggs. This unexpected demand, together with the lack of honor of a few breeders, gave the Minorcas the greatest setback, for some breeders reinforced their Minorca breeding hens with Black Leghorns to supply this demand. A few of the breeders kept their Minorcas pure and preserved the qualities which have won for them the popularity that they have attained.

Minorcas have also taken first rank as a table fowl. The old-time prejudice in favor of yellow meat is fast being overcome. In England, Canada and France the table fowl is one with a white

flesh. In juiciness, delicious flavor and tenderness, Black Minorca flesh is seldom equaled and never surpassed.

Minorcas are excellent foragers, being active and ever alert, but there is no fowl that bears confinement better.

Hardiness is a quality which ranks next to egg production in a thoroughly practical fowl, and in this the black Minorca greatly excels.

#### ROSE COMB BLACK MINORCAS

The first record that I find of the Rose Comb Black Minorcas is a description of them that appeared in the *Poultry Monthly* in



FIG. 60.— WHITE MINORCA R. C. COCKEREL.  
FIRST PRIZE, MADISON SQUARE GARDEN.  
BRED BY H. J. TEETZ, GLOVERSVILLE, N. Y.

1891. It was there claimed that the comb variation was neither a sport nor a cross, but came from selection, using at first birds that showed a couple of side sprigs on the regular single comb.

After three years of breeding these birds, a true rose comb resulted. Notwithstanding the drawbacks they have had to overcome, the Rose Comb Black Minorcas are a valued and valuable variety, especially to breeders living in cold climates where the single combs need more careful housing in order to get winter eggs and escape frosted combs.

## SINGLE COMB WHITE MINORCAS

The White Minorcas are like the Blacks in shape and general characteristics, differing from them only in color and size. That originally they were a sport from the Blacks, all of their fanciers and breeders agree. They were brought to this country from England, where they have long been appreciated. They rank with the best egg-producers among white fowls, while at the same time their meat is fine-grained, juicy and of delicious flavor.

## ROSE COMB WHITE MINORCAS

A few specimens of Rose Comb White Minorcas have been exhibited at shows. The owners of all that I have seen have called them sports and said they were yet in the experimental stage.

## LEGHORNS

IRVING F. RICE, CORTLAND, N. Y.

Farmers' Institute Lecturer



The variety of the Mediterranean class of poultry known as Leghorns is of Italian origin, and it is supposed that they were first introduced into America in 1835, although this importation created very little interest. In 1853 another lot was imported, in which a greater interest was developed. Subsequently a few more lots were brought from their mother country, but so far as known importations were not numerous, nor was the total number of birds imported large. The early importations consisted of brown, white, buff and black



FIG. 61.—PRIZE-WINNING WHITE LEGHORN FEMALE. OWNED BY IRVING F. RICE, CORTLAND, N. Y.

specimens. There may possibly have been other colors but only the brown, white and black varieties were developed from stock brought in at that time.

As introduced from Italy, the Leghorns generally, if not exclusively, had single combs. That type of comb had always been far more popular than the rose comb which was developed from an infusion of Hamburg blood. The only thing that can be said in favor of the rose comb is that it does not freeze so quickly as the single comb; but, to be profitable, any bird must be kept where the comb will not freeze.

The ear lobes in the original stock were red rather than white, as the standard now requires. The birds were small in size and



FIG. 62.—PRIZE-WINNING WHITE LEGHORN COCK. OWNED BY IRVING F. RICE, CORTLAND, N. Y.

it is only recently that a standard weight has been established, although they have very noticeably increased in size. Some breeders have developed a strain that is more than twice the original size, although it is conceded that the profitable Leghorn is the medium-sized bird, and not the over large, nor yet the small old-fashioned specimens. The old-style Leghorns were not to be compared to the up-to-date specimen seen in the show room.

The American standard type of Leghorns is the product of the fanciers of America who have spent years in carefully breeding out defects, until they have perfected a Leghorn which is

a finely modeled, sprightly fowl. The Leghorns in general hold the same place among fowls that the Jersey cow does among cattle and, like the latter, gives the largest returns for the least expense in housing and feeding.

The Single Comb White Leghorns enjoy the greatest favor among breeders, and the largest egg farms of the world are stocked with them. Their eggs are larger and whiter than the other varieties; and, as the great markets demand these qualities,



FIG. 63.—PRIZE-WINNING R. C. WHITE LEGHOEN  
HEN. BRED BY TURTLE POINT FARM, SARATOGA,  
N. Y.

the highest quotations are always given for fancy White Leghorn eggs. The Single Comb White Leghorns are beautiful birds with their snowy white plumage, bright yellow legs and beaks and red heads. Like all Leghorns, they are made up of curves and their proud, graceful carriage demands attention everywhere.

The Leghorns are nervous fowls; but this nervous energy is turned to good account, since they exercise continually and thus overcome the difficulty of putting on too much fat to make good layers, as is the case with many of the larger, less active breeds.



FIG. 64.— A BEAUTIFUL SILVER LEGHORN HEN. BRED BY TURTLE POINT F  
SARATOGA, N. Y.

They are called "non-sitters." While this is not entirely correct, it is true to a certain extent, as they do not become broody often, and then are easily convinced that the nineteenth century hen should reproduce her family by aid of the incubator. It takes but a few days to convince her that her one business is to produce eggs.

While the bodies of Leghorns make small carcasses as dressed poultry, they rank high in quality, the meat being tender and fine



FIG. 65.—FIRST PRIZE R. C. BROWN LEGHORN PULLET.  
OWNED BY TURTLE POINT FARM, SARATOGA, N. Y.

grained, and they can be raised to the killing age very cheaply. They are always plump, even when very young and small, and are in fit condition to make broilers when the heavier breeds are simply frames.

The chicks from healthy Leghorn breeding stock are strong, sturdy little fellows that are easy to raise if intelligent care is given them. They mature very rapidly and are great foragers, picking up food that would otherwise go to waste. They will

commence to lay at about five months of age and are veritable egg machines if properly fed and cared for. The Leghorn eggs are exceptionally fertile under proper conditions.

#### ROSE COMBS AND BROWN LEGHORNS

The Rose Comb White Leghorns are supposed to possess the same qualities as the Single Combs with the exception of the comb; and, while they have not become so popular as the single comb variety, they are beautiful and also profitable birds.

Next to the Single Comb Whites, the Brown Leghorns enjoy as the whites, and do not lay so large nor so white an egg. Their daintily-laced coats of golden brown, blending so prettily with the bright red of their combs. As a rule they are not so large as the whites, and do not lay so large nor so white an egg. Their eggs are termed by the trade "tinted" eggs, and do not bring the highest market price. It is harder to breed them correctly on account of the lacing in the several sections as demanded by the American standard of perfection. Like the Single Comb Whites they have the rose comb sisters which are their duplicates with the exception of the comb.

The Brown Leghorns have never become quite so domesticated as the Whites, being more wild, and defying low fences to restrain them. However, the treatment of any fowl has much to do with this characteristic. With uniformly quiet and gentle treatment they will become very tame and seem to enjoy the attentions given them by their usual attendants, but are suspicious of strangers and always on their guard.

Brown Leghorns are known as "parti-colored" birds, and usually require two matings — one for pullets and one for cockerels — to produce the required coloring and lacing. The early Brown Leghorns were very light in color and were sometimes called "red." The American standard exhibition male has the red very rich in tone, with hackle and saddle feathers cleanly striped with black. The colors of the females, like those of most birds, are not to be compared with those of the male. The standard female has a ground color of light brown, with black tail, dark brown flight feathers and a fine lacing of dark brown on the back and wings, while the hackle is orange-yellow with black

stripe. From this you will see that it requires no little skill to select and breed birds which will conform to the standard requirements.



FIG. 66.— FIRST PRIZE BLACK LEGHORN HEN. OWNED BY TURTLE POINT FARM, SARATOGA, N. Y.

#### OTHER VARIETIES

The Buff Leghorns have never enjoyed the popularity of the whites and browns, which fact is probably due to the reason that the early Buff Leghorns could not be relied upon to lay a white egg, although the present-day Buffs have overcome this fault very noticeably. They are very beautiful with their soft, rich buff color, and like the browns are hard to breed correct in color, as the standard requires.

The Black Leghorns are like the other members of the Leg-

horn family with the exception of the color of the plumage there are the single and rose comb varieties. The plumage is rich, glossy black and the legs are yellow, as in all of the different varieties of Leghorns. They are very striking in appearance and are really a very good fowl, laying splendid eggs and many of them. This species would probably have received more notoriety were it not for the fact that Americans, as a whole, seem to admire white fowls more than black, while the Spanish people on the contrary prefer the black.



FIG. 67.—A HIGH-CLASS BLACK LEGHORN MALE. OWNED BY TURTLE POINT FARM, SARATOGA, N. Y.

There is one other variety of Leghorns which has been admitted to the standard. This is the Silver Leghorn, which will probably never receive the attention that the varieties already described have. It is supposed to carry the same type and characteristics with black and white plumage. The Pyle Leghorn as well as the Silver Leghorns are what are termed sports of the original stock and have been obtained by crossing with game fowls. They also are not popular with the general public for an "all purpose fowl."

## BARRED PLYMOUTH ROCKS

E. B. THOMPSON, AMENIA, N. Y.



To breed ordinary Barred Plymouth Rocks is easy but to produce high quality Barred Rocks is difficult, for the same reason that common horses are easy to breed and two-minute ones hard to produce.

To obtain quality show birds one must have the best blood that is known to be winning prizes regularly in the keenest competition. These birds must then be mated right to produce chickens of prize quality.

Two separate matings are needed — one to produce exhibition cockerels and one to produce exhibition pullets; the finest prize cockerels and pullets cannot be bred from the same mating.

A mating to produce quality show cockerels must be headed by a first-class male of good size and shape, good comb with four to six points, and good head, medium dark plumage, even blue tone in color from head to tail, with narrow, straight barring to the skin. Mate this male with hens or pullets of fine size and shape, with backs and bodies of good length and breadth, short tails, small combs, bay eyes, and narrow, straight barring to the skin. These females must be dark in color and bred from exhibition colored males.

To produce quality show pullets the mating must be headed by a first-class male whose dam and line of breeding was a hen of exhibition color: his size and shape must be good, also comb and head, legs and beak clear yellow and plumage of even light,

medium blue shade of color throughout, with straight narrow barring to the skin and clearly barred wings. Mate this male with hens or pullets of a medium shade of exhibition color, having as high a show quality as can be obtained, with narrow straight barring, and as yellow legs and beaks as may be had with the best color and barring in pullet-bred females. Bodies and backs should be of good length and breadth.

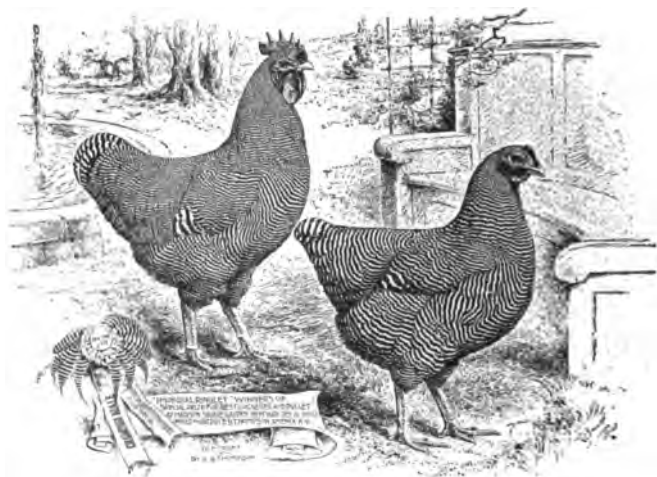


FIG. 68.—IMPERIAL "RINGLET" BARRED ROCK COCKEREL AND PULLET. PRIZE WINNERS, MADISON SQUARE GARDEN, 1913-14. OWNED AND BRED BY E. B. THOMPSON, AMENIA, N. Y.

All birds show some defects. Therefore, in either cockerel or pullet mating, be careful not to mate a male with a female having the same fault. Overcome the defects in one sex by the same sections that are perfect in the opposite sex. To illustrate: a fine male may have a comb with seven or eight points; no female having more than four points to her comb should be mated with him.

Where possible, mate together birds with perfect parts and sections. For example, mate a male with perfect back and tail shape with a female having perfect back and tail shape. A successful breeder who has large numbers of fine quality birds that have been bred in line for many years can mate almost perfect birds together and produce the great sensational winners of each

year. He knows what his matings will bring out so far as it is possible to know what line-bred stock for many years back will produce. My long list of first prize Madison Square Garden winners have been the result of scientific mating and attention to the individual character of their ancestors.

A two-year-old cock bird may be mated with either hens or pullets with equally good results. The theory that cockerels must

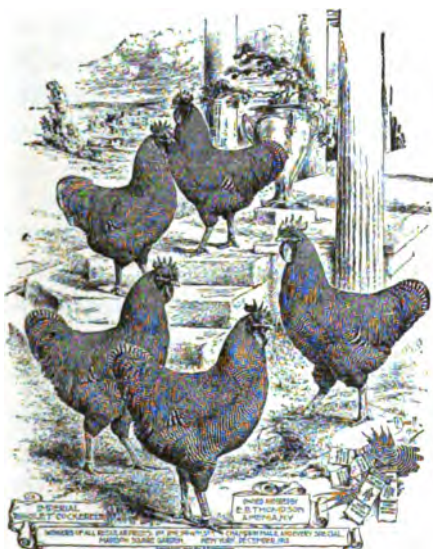


FIG. 69.—IMPERIAL "RINGLET" BARRED ROCK COCKERELS. WINNERS OF ALL REGULAR AND SPECIAL PRIZES ON COCKERELS AT MADISON SQUARE GARDEN, 1913-14. BRED AND OWNED BY E. B. THOMPSON, AMENIA, N. Y.

be mated with hens and a cock with pullets has never been proven during my thirty years' experience in producing first prize Madison Square Garden winners. The number of females to one male may be from four to ten.

I recommend that all interested in the Barred Rock — America's most popular breed — obtain a copy of the American Standard of Perfection, published by the American Poultry Association. This book describes in detail just what a perfect bird should be and is a necessary guide. Apply to S. T. Campbell,

Secretary, American Poultry Association, Mansfield, Ohio, or any poultry journal.

In selecting males and females for both the cockerel and pullet matings before mentioned, shape must be kept in mind. "**Shape** makes a breed and color a variety of that breed." The **breasts** should be full and broad, bodies fairly long and deep, **backs** broad and quite long, rising to a tail carried at about 40 to 45 degrees and of medium length only. A long, loose, wide-spread tail spoils a bird, male or female; a high tail is a serious **fault**. In a perfectly shaped Barred Rock of today the back runs into the tail so nicely that there is no dividing line indicating where the back stops and the tail begins.

More or less black appears on the legs and beaks of the best Barred females of the exhibition cockerel family, and it must be remembered that these females are darker in color than the exhibition females described by the American Standard of Perfection, and which are produced by a pullet mating. The dark, narrow, straight barred females of the cockerel family are absolutely necessary to produce the highest quality of medium dark blue tinged exhibition male. Many shows now have a class for cockerel-bred hens and pullets and give prizes for them; also classes for pullet-bred males. These classes do not compete with the regular exhibition classes.

I mention straight barring in Barred Rocks; by this I mean that the light and dark bars must run straight across the feather, the light bar being clean cut from the dark bar and no color of either running into the other.

The face and head should be large, also the eye; these points show intelligence and go with a style and carriage of body that give the bird an elegance.

The most important factor in mating and breeding quality Barred Rocks is the blood lines and ancestry of the birds to be mated. The skilled breeder must know all the characteristics and breeding traits of his birds for many generations and mate his breeding hens with this knowledge in mind.

A beginner just starting with this breed, or any one who has been unsuccessful, will follow the only wise course and buy his

breeding stock from the breeder who has proven his ability to produce the best, and instruct him to mate the birds as he would his own matings. Commence with a few; a trio or a small pen of high grade birds will be enough. These will build a solid foundation for success.

The proper raising of young birds is of serious import. The matings may be the best and contain New York's first prize blood, but unless the young and growing chicks are grown under the right conditions they will not mature into quality birds. Clean, roomy, well-ventilated coops, the best and purest feed, and free range over grass are absolutely necessary to the maturing of the best exhibition birds — birds that are priceless in value.

## MINOR BREEDS OF PLYMOUTH ROCKS

### WHITE PLYMOUTH ROCKS

The White Plymouth Rock first appeared in the early eighties as a sport from the Barred Rock. At that time the Java family, black, white and mottled, was quite prominent, and it is evident that the blood of the White Java was used in the development of the White Rock. In fact, to this day, the willow shank of the old White Java often manifests itself in the poor shank and toe color of an occasional specimen of White Rock.

In 1886, Mr. A. C. Hawkins of Lancaster, Mass., had one Barred Rock mating that produced several white sports. The



FIG. 70.—PRIZE-WINNING BUFF PLYMOUTH ROCK MALE. OWNED BY EDGEWOOD FARM, BALLSTON LAKE, N. Y., N. V. WITBECK, PROPRIETOR.

next season he bred the best of these together and this mating resulted in the foundation of one of the greatest exhibition strains of White Plymouth Rocks in existence.

The standard of weight and shape being the same for all varieties of Plymouth Rocks, it will be necessary only to add that



FIG. 72.—FIRST PRIZE WHITE PLYMOUTH ROCK PULLET  
AT ALBANY, 1912. BREED AND OWNED BY P. L. CAL-  
LENDER, CHATHAM, N. Y.



FIG. 71.—PRIZE-WINNING WHITE PLYMOUTH ROCK  
MALE. BREED AND OWNED BY P. L. CALLENDER,  
CHATHAM, N. Y.

the Whites should have pure white plumage; red eyes, comb wattles and ear lobes, and yellow shank and toes.

When bred to the standard weights the White Rocks are unsurpassed as an all-purpose fowl. When general appearances and utility qualities are taken into consideration they are good layers of brown eggs and make splendid broilers and roasters. When white plumage is desired it would seem that the White Plymouth Rock is the premier of American general purpose fowls.

#### BUFF PLYMOUTH ROCKS

The Buff Plymouth Rock was originated and first brought to the attention of the American fancier by a Mr. Buffinton of Fall River, Mass. In the latter eighties they were produced by the union of Rhode Island Reds and White Plymouth Rocks, and many of the yellow Single Comb Reds of those days were made to pass for Buff Rocks. Later other breeders used Buff Cochins, Light Brahma and Buff Leghorn blood in the makeup of some of the leading strains.

The standard describes the surface color of this variety to be an even shade of rich golden buff, but as judges differ as to what constitutes golden buff it is left to the dealer to say which shade of buff color best suits him. It is very difficult to breed a large percentage of good, solid buff birds. As a consequence this variety has not kept pace in popularity with some of our other old breeds, although they possess merits that should commend them to the American farmer. Besides having all the qualities of a good market fowl they are splendid winter layers. A good standard colored Buff Rock "is a thing of beauty and a joy forever," and is the handsomest buff fowl in the show room.

#### PARTRIDGE PLYMOUTH ROCK

The Partridge Plymouth Rock, one of the newest members of the Rock family, is attracting considerable attention of late and in some sections of the country is quite popular. When carefully bred they are very handsome, but it requires what is called "double-mating" to produce the standard colored specimens.

There are many claimants for the honor of having originated this variety, each giving a different make-up of blood. One

claims to have produced his strain by using Partridge Cochin females crossed with an Indian game cockerel, afterward infusing Golden Wyandotte blood. Others used Partridge Cochin and Brown Leghorn crosses, while still others mated Partridge Wyandotte sports with birds bred from a blending of Partridge



FIG. 73.— PRIZE-WINNING COLUMBIAN ROCK PULLET. OWNED BY  
A. A. WHYLAND, CHATHAM, N. Y.

Cochin, Indian game and Brown Leghorn blood. However, it takes an expert breeder to make any headway with this breed.

Red and black are the predominating colors of the male and mahogany brown that of the female. The feathers of the neck are bright red with a black stripe through the center of each feather, and the remainder of the plumage is distinctly penciled with black. It is a variety of fowl that has great virility and approaches the other varieties of the Rock family in usefulness.

## SILVER PENCILED PLYMOUTH ROCKS

The Silver Penciled Plymouth Rock is not a very popular variety and it is very difficult to settle upon who was the originator of it. One strain is a combination of Dark Brahmas, Silver Gray Dorkings and Mottled Javas, and is the strain that has thus



FIG. 74.—FIRST-PRIZE COLUMBIAN ROCK COCKEREL. OWNED BY A. A. WHYLAND, CHATHAM, N. Y.

far produced the best specimens. A word description of the markings of the plumage of the Silver Rock would be difficult of comprehension by the novice unless accompanied by the feathers, but the predominating color of the male is silvery while embellished with black. The predominating color of the female is gray with the distinct penciling that characterizes the Silver Penciled Wyandottes. Well-bred and good-colored specimens are very handsome and are fair layers. They deserve to be more popular than they are today.

## COLUMBIAN PLYMOUTH ROCKS

The Columbian Plymouth Rock, the newest standard variety of the Rock family, is not the least in worth and public estimation, as it possesses qualities that endear it to the heart of many a fancier. No fowl, in the eye of the American fancier, possesses greater beauty of feather and markings than the old Light Brahma, but its utilitarian qualities have caused it to be laid aside from the standpoint of profit. It has been the aim of many to produce a fowl that would imitate the Brahma in color, but would possess profitable utility qualities; hence it was that when the Columbian Wyandotte appeared—a fowl with the shape of a Wyandotte and the color and markings of the Light Brahma—it attained a popularity that still keeps it well up with the leaders.

The same can be said of the Columbian Plymouth Rocks. They possess all of the good qualities of the older varieties of Plymouth Rocks with the color and beautiful markings of the Light Brahma, which alone caused them to jump into immediate popularity.

The Columbian Rock has been made up from various sources. Mr. Clements of Ohio used Barred Rock, Light Brahma and Single Comb Sports from Columbian Wyandottes to produce his strain. Others crossed Light Brahma males on White Plymouth Rock females with a top cross of Columbian Wyandottes. The principle objection to the Columbian Rock is brassiness in color of male, but many specimens are being produced without this defect.

## THE WYANDOTTE

A. J. GIES, DELMAR, N. Y.

Secretary-Treasurer, National White Wyandotte Club



The Wyandotte fowl is so well known at the present time that it seems almost unnecessary to go into any extended description of them. I realize, however, that among the thousands who begin poultry keeping each year the majority are not readily informed with regard to the different breeds. To take up each variety of the Wyandotte family and tell its history and its virtues would require a large volume.



FIG. 75.—WHITE WYANDOTTE HEN, "LADY DELMAR." FIRST AND SPECIAL BEST SOLID COLORED PULLET, ALBANY SHOW, 1912. BRED BY A. J. GIES, DELMAR, N. Y.

The Silver White Laced Wyandottes were the first to appear. Very little was heard of them prior to 1880, although for fifteen or twenty years previous fanciers in different section of the country were at work trying to perfect them. Their origin is shrouded in mystery. They were apparently produced by a careful mingling of Dark Brahmas, Silver Spangled Hamburgs and a small amount of Cochin blood. They were first known as American Sebrights, and, after repeated attempts, were admitted in 1883 to the American standard of perfection under the name of Silver Wyandottes. This name was given to the breed by Mr. F. A. Houdette, of Massachusetts, who named them after the tribe of Indians known as Wyandottes.

The Silver Wyandottes produced occasional sports that were pure white in color. These were generally males, and, to get good females to mate with them, White Hamburgs, and then Rose Comb White Leghorns, and in some cases White Cochin females were used. It was not long before fanciers were advertising White Wyandottes, and thus a new variety was launched into the poultry world. While the Silver Laced Wyandottes are still largely bred, one of the most popular varieties of fowl in America today is the White Wyandotte.

The intense interest aroused by the Silver Laced Wyandotte and the White Wyandotte brought about the production of the Golden Laced Wyandotte, which was admitted as a standard variety in 1888. In making this variety the Rose Comb Leghorn, the Hamburg, the Cochin, the Golden Sebright and possibly the English Red Cap were used.

Later, in 1894, the Black Wyandotte and the Buff Wyandotte were added to the standard varieties. At the start there were two distinct strains of Buff Wyandottes, one produced by a cross of the Silver Wyandottes with the common red fowl of Rhode Island, and the other by crossing Golden Wyandottes and Buff Cochins, and the recrossing of the two strains has given us the beautiful Buff Wyandotte of to-day. The Black Wyandotte was originated in Ohio as a result of a cross of dark-colored sports from the Silver Laced Wyandottes and black pullets that were sports of the Barred Plymouth Rocks.

In 1901 the Partridge Wyandotte and the Silver Penciled

Wyandotte were made standard varieties. The Partridge Wyandottes were the result of crosses between Indian Game, Golden Wyandottes and Partridge Cochins; the Silver Penciled Wyandottes of crosses between Silver Laced Wyandottes, Partridge Wyandottes, Dark Brahmas and Silver Penciled Hamburgs.

The Columbian Wyandotte was admitted as a standard variety in 1906. This variety was originated in Massachusetts, and was made by the use of White Wyandottes, Barred Plymouth Rocks and Light Brahmas.



FIG. 76.— A FINE TYPE OF MODERN WYANDOTTE MALE.

Thus in the Wyandotte we have a composite fowl made up of several distinct breeds and inheriting most of the good qualities of each. If the Wyandottes had the most commonplace appearance they would still be strong favorites, on account of their utility qualities. One of the strongest points of the variety is its beauty. It is a bird of graceful curves with no straight lines or angles. Anyone who has seen Wyandottes in the show room or a flock of them on free range has immediately been impressed with the

beauty of the birds. The popularity of the Wyandotte has been of gradual growth. It has not been brought about by means of excessive advertising or booming, but rather by real, solid merit.

In the laying contests held the last few years, Wyandottes have invariably been the winners or very close rivals to the winners. When it comes to actual laying the only real rival of the Wyandotte is the Leghorn. Wyandotte breeders do not claim that Wyandottes will lay more eggs than White Leghorns, but they do claim that more eggs will be laid during the cold winter months and that the total value of the eggs produced in a year will be higher.

Wyandottes are almost invariably the largest classes in all our shows. It is as a utility and general purpose fowl that the Wyandotte has attained its present unequalled popularity, as there is much to be said in its favor.

First. They excel as all-year-round layers, and are especially good winter layers, due to the fact that they have small, almost non-freezing combs, and if properly handled will produce a large number of eggs in winter, making the total value of their eggs for the year very high.

Second. They are of the correct size and compact build for the ideal market fowl, and as market poultry at any age, from the squab broiler size to the roasting size, they are always compact and plump, and dress off with rich yellow legs and bright yellow skin. As broilers they will stand more forcing without going off their feed than any other variety. The hens are exceedingly fine-boned, and are almost invariably preferred by discriminating purchasers.

Third. They are one of the most docile of fowls and will stand confinement exceptionally well (or, if given free range, make splendid foragers), and are comparatively small eaters, requiring very little more per bird than Leghorns.

Fourth. The females make excellent sitters and mothers. They are just the right size (not too large) and are very gentle. This is a good feature in a general purpose fowl, as farmers desire a breed that will hatch their own eggs. If it is so desired, however, they can easily be broken up from sitting.

Fifth. No breed is better suited to a cold climate than the Wyandotte. They have almost non-freezable rose combs and are so loosely feathered that they can stand a great deal more cold and

yet continue to produce eggs in the coldest weather, when eggs usually command a premium price.

Sixth. With some breeds a great many chicks die in the shell. This is not the case with the Wyandotte. For a large bird, if properly handled, they hatch exceedingly well.

Seventh. No more beautiful fowl exists, and I am convinced that half the people who breed Wyandottes are led to do so by the attractive appearance of these fowls.



FIG. 77.—SILVER WYANDOTTE COCK.  
PRIZE WINNER, MADISON SQUARE  
GARDEN. OWNED BY W. E. SAMSON,  
PORTLANDVILLE, N. Y.

Among the varieties of Wyandottes there are so many colors and combinations of colors represented that a variety can be selected to suit any individual preference. The Silver Laced Wyandotte is a beautiful combination of black and silvery white. This variety in the females is beautifully colored on the breast, and the back tail coverts and the feathers on a part of the body consist of silvery white centers laced with black. The males have a silvery white top color and are exceedingly handsome. The Golden Wyandotte has the same color characteristics, except

that the color combination is golden buff laced with black instead of silvery white and black. The White Wyandotte, as its name implies, is a beautiful pure white bird with rich yellow legs, neat head points and a compact, well rounded body. The Buff Wyandotte is of a golden buff color similar to a newly coined penny. A flock of this variety, even in color and of uniform type, is especially striking. The black variety is jet black with a peculiar rich gloss, or sheen, giving a greenish reflection. The

Columbian Wyandotte has the same color characteristics as the famous old Light Brahma. The body color is pure white with beautiful hackles, each feather of which is black, exquisitely laced with white. The tails are black with the tail coverts laced or edged with white. The main wing feathers are black and white, black predominating. This results in an exceedingly handsome fowl. The Partridge Wyandotte and the Silver Penciled Wyandotte have the same color formation pattern. That of the Partridge variety is a dark mahogany red, beautifully penciled in the females similar to Partridge Cochins. The Silver Penciled variety is of a lovely steel gray color similar to the Dark Brahmas.

Among the other varieties of Wyandottes that have not been admitted to the standard, but on which breeders are making rapid progress, are the Buff Laced, Blue Laced, Red Pyle, Buff Columbian, Birchen, and the Blue and Cuckoo Wyandottes, which have barred color similar to the Barred Plymouth Rocks.

To sum up, the Wyandottes are excellent all-year-round layers; one of the best market varieties; are exceptionally quick maturing and hardy; are excellent sitters, small eaters and good foragers, and are exceedingly beautiful birds — in short, one of the best all-around breeds that have as yet been produced.



FIG. 78.—PRIZE-WINNING SILVER WYANDOTTE COCK, SHOWING EXCEPTIONALLY FINE BREAST LACING. OWNED BY W. E. SAMSON, PORTLANDVILLE, N. Y.

## RHODE ISLAND REDS

GEORGE W. TRACEY, KINDERHOOK, N. Y.

Secretary, New York State Branch Rhode Island Red Club of America

### ORIGIN



The breed of domestic fowls known the world over as Rhode Island Reds, is the direct result of a condition that existed in Boston, Mass., and vicinity, seventy or more years ago. The inhabitants of this territory had to be supplied with eggs, broilers and roasters, and many were the residents of the southeastern part of Massachusetts and the little state of Rhode Island who made their living by furnishing poultry

and eggs for the Boston market.

These poultry raisers found that it did not pay to keep two distinct breeds of poultry, one for eggs and one for meat. They discovered that the greatest profit accrued from keeping a breed that would lay eggs the year around and at the same time be possessed of a carcass that would appeal to the epicureans as well as of a size that would satisfy the demand for roasters. Broilers also being desired as profit producers, they should have bred in them the quick-growing habit.

The "Down East Yankees" were people who knew how to do what they wished, so they produced the Rhode Island Red breed of poultry. So far as we have been able to learn, this is how it was done. They used the best layers produced each year and mated with them the best red male bird that could be found. It did not matter what color the female was so long as she was healthy and vigorous and laid a goodly number of eggs; but they did insist upon a red male of different blood from the one used the year previous, as they believed out-crossing produced vigor. In addition to the color of the male they required that the bird be of good constitution, size and shape.

From experience they learned that their best laying females were those having a rather long, fairly deep, wedge-shaped body. In selecting a male they looked for one having these same characteristics — the rounder, deeper and fuller the breast the better. They also insisted upon yellow legs with its attendant yellow skin. The net result of their years of careful selection along the lines indicated was a fowl that laid large brown eggs the year around as well as producing a quick growing, juicy broiler or roaster with meat of a delicious flavor.



FIG. 79.—TYPICAL RHODE ISLAND RED HEN.

Years of the above-described methods of breeding resulted in the vast majority of the flocks in eastern and southeastern Massachusetts and Rhode Island gradually becoming red.

The breeds of fowls used in the making of the Rhode Island Reds were the Red Java, imported from Java and islands in its vicinity, the Chittagong, the Red Malay and the Cochin China.

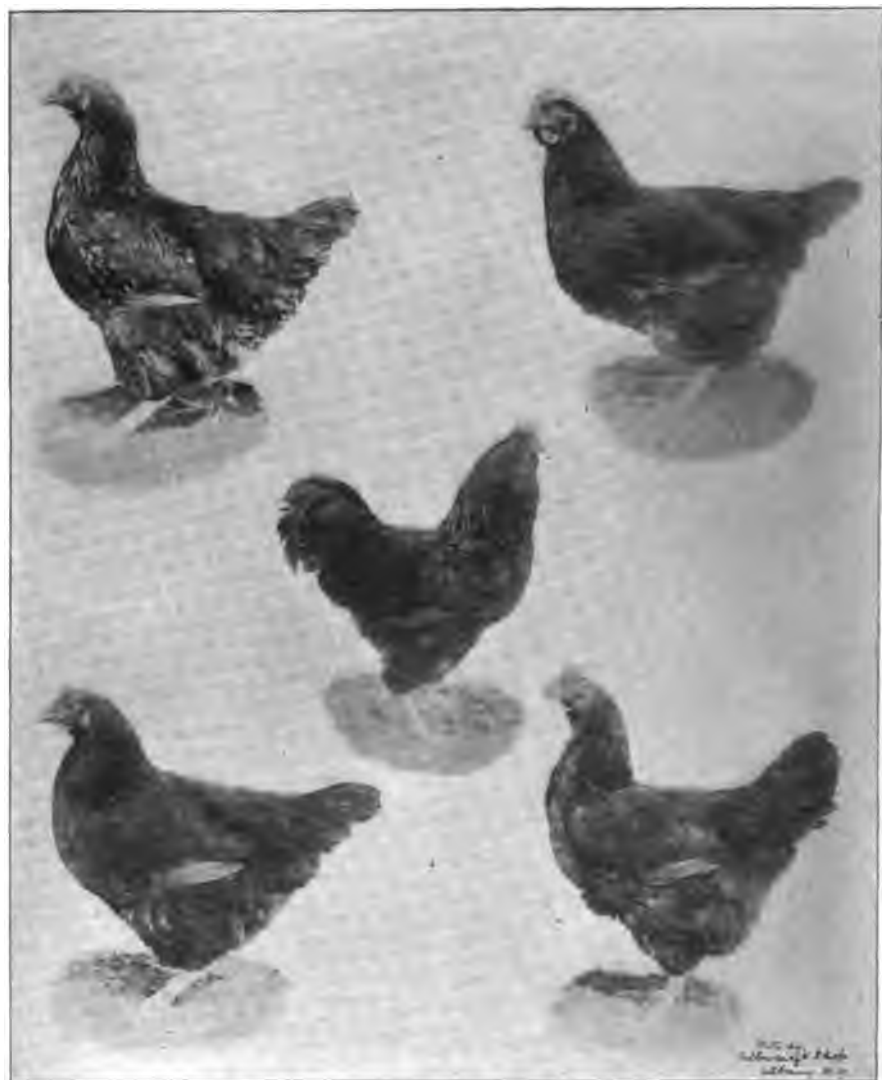


FIG. 80.—GROUP OF RHODE ISLAND REDS, OWNED BY GEORGE W. TRACEY, KINDERHOOK, N. Y.

Many specimens of the above-mentioned breeds were brought from the far east in ships that plied between the Orient and New England from 1840 to 1850. The Red Javas of that period were fowls of a dark red plumage, both male and female, and having rose combs.

#### ROSE COMBS

There are two varieties of Rhode Island Reds — the Rose and Single Comb. No doubt the best Rose Comb Reds of the present

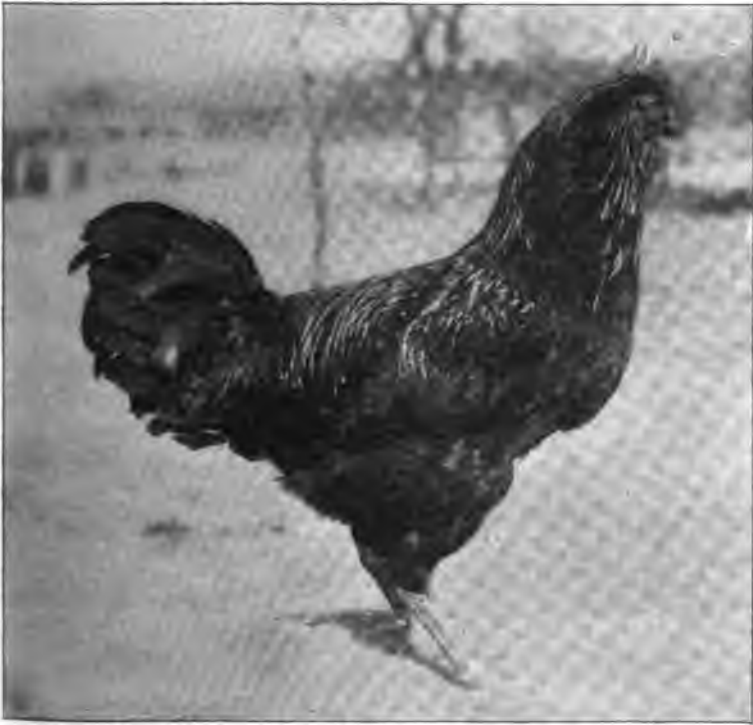


FIG. 81.— TYPICALLY-SHAPED RHODE ISLAND RED COCKEREL. BRED BY  
GEORGE W. TRACEY, KINDERHOOK, N. Y.

day have plenty of the Red Java blood coursing through their veins, but some Rose Combs were originated by crossing Red Comb Brown Leghorns with the Single Comb Red. So we can safely state that the present day Rhode Island Red can claim as having among its ancestors the lordly Light Brahma, the Buff Cochins, the Red Malay, the Red and Black Java, the old Ameri-

can Dominique, the Rose and Single Comb Brown Leghorn, the Red Chittagong and the Red Cochin China.

As a rule the exhibition Rose Comb Reds were not so large or so well shaped as the Single Combs, the large majority of them up to several years ago resembling the Wyandotte in type. Of late years this defect has been quite generally rectified, until now the winning specimen at the leading shows have the same general shape and color as the Single Combs, the only difference being in the combs.

#### ADAPTABILITY

The net result of the blending of all these breeds resulted in the production of what we confidently believe to be the greatest utility fowl in the world. They do well in any climate. In England they are fast supplanting all other breeds, according to the statement of Mr. William Cook, the leading poultry breeder of the British Isles, at the last Madison Square Garden show. In all sections of British America they thrive splendidly; in the torrid zone, when introduced, they soon became the leading utility fowl, and they have made their impress in all sections of Africa, Europe, Asia and South America. Wherever civilization exists the Rhode Island Red fowl is found — a fowl that has been persistently outcrossed for generations and has one characteristic that is the source of all its greatness, namely, vigor. They stand confinement, heat and cold and produce eggs under either condition.

#### FROM THE FANCIER'S STANDPOINT

The Rhode Island Reds first began to attract the attention of the fancier about the year 1900, the strains especially attractive being then known as the "Macomber" or the "Tripp" fowls. John McComber and William Tripp, who were natives of Rhode Island, having long resided near Westport in that state, as far back as 1854 began to breed poultry "scientifically" for both eggs and meat. They both bred along the same lines and for years interchanged their best birds with each other, using those thus obtained to cross on the flock. Their fowls became famous in that section, and this fame spread until farmers and poultry raisers from all sections of Rhode Island and eastern and south-

eastern Massachusetts purchased eggs to set from Mr. William Tripp, Mr. McComber having died. Mr. Tripp continued to breed the strains that he and Mr. McComber worked long to build up, and the present-day exhibition Rhode Island Red can be said to have been originated by the last named.

It was left to Mr. Isaac C. Wilbur of Little Compton, R. I., however, to give this breed its name. Once the Rhode Island



FIG. 82.—FIRST PRIZE S. C. RHODE ISLAND RED COCK.  
BRED BY GEORGE W. TRACEY, KINDERHOOK, N. Y.

Reds were introduced to the show room their mark was made, and their fame rapidly spread until they were admitted to the standard at the meeting of the American Poultry Association held at Rochester, N. Y., in 1904. The fanciers who had the making of the Rhode Island Red standard were keen New Englanders, who by their shrewdness made a standard calling for the construction

of a fowl that immediately attracted the attention of the entire poultry world; it depicted a bird that had the requirements of an egg-laying machine.

#### STANDARD REQUIREMENTS

The standard for Rhode Island Reds calls for a body, deep, broad and long, the weights being for cocks  $8\frac{1}{2}$  pounds, cockerels  $7\frac{1}{2}$  pounds, hens  $6\frac{1}{2}$  pounds and pullets 5 pounds; the best layers are birds bred to these weights. The 5-pound pullet develops into a hen of  $6\frac{1}{2}$  pounds that does not look quite so long-bodied as when at her best as a show pullet, the weight coming more from deepening and filling out. In other words, the ideal Rhode Island Red pullet at 5 pounds has the bone and frame, and the ideal  $6\frac{1}{2}$ -pound Rhode Island Red hen has this same frame with its added muscles and internal organ development.

#### COMBINATION OF UTILITY AND SHOW QUALIFICATIONS

I shall not go into the breeding of the Red from an exhibition point of view, but I emphatically state that to secure good exhibition Reds, one must breed them just as though he were breeding for utility. One cannot breed either unless he has vigor, and the best standard specimens are the best layers. As an instance we will cite the record of the pullet that won first prize at Madison Square Garden in the 1907-8 show. This pullet laid at the show, January 1, 1908, an egg in her shipping coop coming home next day, and from January 1 to July 5, when she became broody, had a record of 165 eggs. She was a wonderful hen and was the foundation of a race of layers. One of her granddaughters won first prize as pullet at the Garden in 1910. This pullet laid at four and a half months of age, and was six months when she won first prize at the Garden. Another granddaughter, and one that as a pullet looked very much like her as a three-year old hen, defeated twenty-four females at the New York Palace show last December. She is four years old and has been laying continuously since December. Fig. 79 shows her as exhibited at the show, and depicts her just as she is in our yards to-day.

In the group of four females and one male, Fig. 80, we have a son and daughter and three of her granddaughters. The male is two years old, weighing  $8\frac{3}{4}$  pounds at the time of the taking of

the picture, and the females all varied in weight from 5½ pounds to 6½ pounds. The darkest one is the heaviest and oldest, she having been hatched in March, 1913, and is a daughter of the old hen. They all possessed the superb laying trait inherited from her.



FIG. 83.—PRIZE-WINNING R. C. RHODE ISLAND RED  
COCKEREL.

The cockerel shown in Fig. 81 is a typically shaped Rhode Island Red, one year old, weighing 8 pounds. When he fills out he will weigh about 9 pounds; his body will be heavier and will not appear quite so long. This profile shows the long body of the Rhode Island Red. The cock bird (Fig. 82) was hatched in September and when fifteen months old was shown at Madison

Square Garden, winning first prize and champion Rhode Island Red Male, Rose and Single Combs competing, and \$500 was refused for him. His picture was taken at that show and depicts him just as he was, weighing 10 pounds. His mother was the

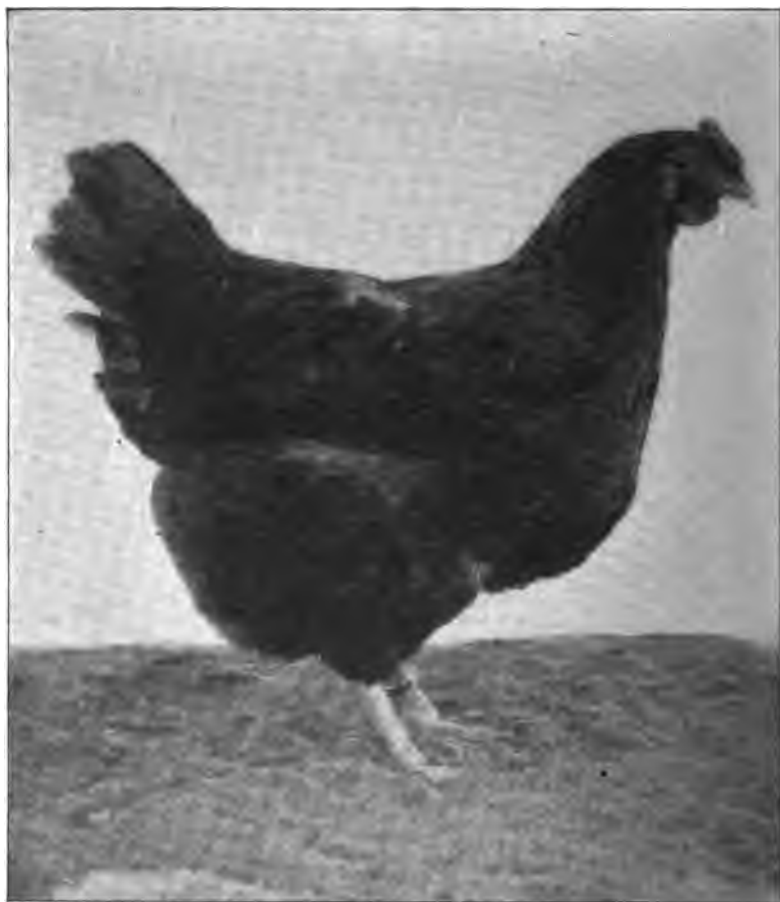


FIG. 84.—PRIZE-WINNING R. C. RHODE ISLAND RED HEN. OWNED BY GEORGE W. TRACEY, KINDERHOOK, N. Y.

celebrated pullet "Red Lady," she winning her name in fame by carrying of color special at Madison Square Garden. She produced eggs after the show but, although tried with different males, laid only one fertile egg from the close of the show until she went broody in July. We then placed her alone in the yard with

a two-year-old cock bird, as a result of which she laid a clutch of eggs, every one of which hatched. Strange to say, every one was a male. The picture of the Rose Comb in Fig. 83 represents a typical young Rose Comb male, he winning second and special for the best colored male in a class of thirty-six at the New York Palace show.

The Rose Comb hen (Fig. 84) won first prize at the Albany show. She is a little large but very active and a splendid layer, weighing 7 pounds, one-half pound over standard weight.

#### CONCLUSIONS

We believe we have given the true facts concerning the origination of the Rhode Island Reds as a breed, a study of which will readily prove to the most skeptical that there is a reason for their great worth as a profitable utility fowl — a fowl made more valuable from the fact that one can breed them up to the standard requirements without in any way detracting from their utilitarian qualities.

This accounts for the extraordinary popularity enjoyed by the Rhode Island Reds — a popularity based upon pure merit. Another reason for their popularity is the ease with which an amateur may learn to breed them so they can produce specimens capable of successfully competing with the best that can be produced by the skilled professional breeder.

Nearly every Rhode Island Red breeder, both great and small, meets upon ground of common equality, and no one breeder — no dozen breeders — can claim a monopoly of the good Rhode Island Reds. The country is full of them and to our mind the most profitable fowl for the farmer is that strictly American creation, the Rhode Island Red.

## ORPINGTONS

ANDREW S. WHITE, FAYETTEVILLE, N. Y.

Fairfield Farms, Onondaga County, N. Y.



The Orpington fowls are an English breed. They were originated by William Cook of Orpington House, St. Mary Cray Kent, England, a master of scientific poultry culture. His knowledge of the subject of poultry was thoroughly practical as well as theoretical. He knew many different breeds of fowls intimately. He was familiar with the advantages and disadvantages of each, and he knew well what the English poultry public needed. He had seen the importation of the Plymouth Rocks and Wyandottes from America, and had observed that they were readily received in England, notwithstanding the habitual conservatism of the people toward anything new. The Rocks and Wyandottes were the product of an effort on this side to produce a fowl for the times which would combine the advantages regarding size, etc., of the Asiatic breeds with the advantages regarding prolific laying qualities, etc., of the Mediterranean breeds. The wonderful success of the American breeders in these directions was well understood before Mr. Cook presented his first Orpington fowls at the Crystal Palace show, in 1886.

Of the three varieties admitted to the standard, the Black was first introduced, later the Buff, and then the White.

The origin of these varieties was separate and distinct, the Black being a combination of the Black Minorca, Black Rock, and Langshan; the Buff of Golden Spangled Hamburg, Buff Cochins and Dark Dorking, and the White of White Dorking and Leghorn, and Black Hamburg. The Rose Comb Black was from the same combination as the Single Comb Black, excepting that the Black Langshan used was a rose comb bird, a sport from the Single Comb Black Langshan. The Rose Comb Buff was from



FIG. 85.—PRIZE-WINNING ORPINGTON COCK. OWNED BY A. S. WHITE, FAYETTEVILLE, N. Y.

the same combination as the Single Comb Buff, excepting that a Rose Comb Dorking was used instead of a Single Comb Dorking, and similarly the Rose Comb White was produced by using a Rose Comb Dorking instead of a Single Comb Dorking.

In the breeding the white ear lobes of the Hamburg were lost, also the fifth toe of the Dorking and the yellow legs and feet of the Cochins, as well as many other characteristic features of the ancestral stock.

One of the varieties not yet admitted to the standard is the Diamond Jubilee Orpington, which was given the name because of the fact that it was brought out in 1897, during Queen Victoria's diamond jubilee. It was produced by mating the same breeds together as were used in the making of the Buff Orpington, only a Speckled Dorking was used instead of a colored one, this being used for the last cross. The Jubilee Orpington has not been very popular. It is a three-colored fowl, the ground or main color being a rich, reddish brown, barred with black, which is usually a beetle green, and tipped with white. Nevertheless, this variety is worthy of stronger support.

The Spangled Orpington was originated by crossing a Dark or Colored Dorking with Barred Plymouth Rock hens. The pullets from this cross were mated with a Silver Spangled Hamburg cock, which is a black and white fowl, the feathers being black, tipped or spangled with white.

Blue Orpingtons are a cross between the White, Black and Spangled Orpingtons.

The Ermine or Columbian Orpington was originated by an American, and was first exhibited in Boston in 1909. It was produced from accidental crosses of the Black, White and Buff Orpington varieties. The color markings are the same as those of Light Brahmas.

The Cuckoo Orpington is a variety not yet thoroughly established.

The condition of the poultry business in England in Mr. Cook's time was unsatisfactory in that the farmers were not going in for poultry very extensively. Conditions in England in this respect were not so good as in France, Holland and Belgium, and Mr. Cook sought to remedy this condition and to put England among

the foremost of the producers of poultry and eggs the world over. The objection to poultry on the part of the English farmer was that the business did not produce that measure of profit which was found in other lines. Even the Rocks and Wyandottes from



FIG. 86.—ORPINGTON HEN. FIRST PRIZE AND SPECIAL AT BUFFALO, 1913. BREED BY A. S. WHITE, FAYETTEVILLE, N. Y.

America had not fully satisfied the demand for a general purpose fowl that could be raised at a profit by the average farmer.

The Orpingtons from the first aroused much interest and in the main attracted favorable criticisms. They grew rapidly in favor with the poultry public, and from the time that the Buff Orpington was first shown at the Madison Square Garden in 1899, it

became quite the rage in this country. In fact America took hold of the new breed with more enthusiasm and energy than any other country in the world, not because American breeders knew the Orpington to have superior merits to all other breeds, but for the reason that they wished to give it a fair trial. What the final result will show regarding its relative merits and demerits we do not know, but we have gone far enough to demonstrate that the Orpington has come to stay, and that the contribution of Mr. Cook to poultrydom is very valuable.

New varieties of Orpingtons are being produced so rapidly that one feels unable to speak with positiveness regarding the number of varieties of the breed existing at the moment, but it is safe to say that the most popular are those mentioned above. The Partridge Orpington will make its appearance ere long.

All of these different varieties of Orpingtons are large, massive, stately fowls, of beautiful type, deep, broad bodies, thick, stocky, rather short legs, with shanks and feet free from feathers. They have the substance of the Asiatic, and the ambition of the Mediterranean.

The following facts will indicate how successful the breeders of Orpingtons have been in their efforts to evolve a fowl combining the most valuable qualities of the large meat-producing and light egg-laying breeds, with the heavy egg-producing, quick maturing, but small breeds. I have known an Orpington pullet to lay when four months and sixteen days out of the shell, at a weight of seven pounds. Pullets of this breed generally commence laying before they are six months old. They are great winter layers, and the weight of the egg exceeds that of the Leghorn by six ounces or better to the pound, on the average. Pullet's eggs average one pound twelve ounces to the dozen, while hen's eggs will average two pounds and more to the dozen. I have packed hen's eggs that weighed three pounds to the dozen by selecting the largest from the day's yield. Personally I am of the opinion that the Orpington hen or pullet will lay more weight of eggs in a year than the Leghorn hen or pullet, and also at a time when the price of eggs average higher. At five months I have seen an Orpington pullet weighing nine pounds. Matured pullets often weigh ten pounds. Hens commonly weigh twelve pounds. Cockerels weigh twelve

pounds, and cocks commonly fourteen pounds. In rare cases I have seen cockerels that weighed fourteen pounds and cocks that weighed sixteen pounds. These facts show the breed to be quick maturing and heavy egg-laying like the Mediterranean breeds and large like the Asiatic breeds. The American standard of perfection requires the following weights: cock, 10 pounds; cockerel, 8½ pounds; hen, 8 pounds; pullet, 7 pounds.

The Orpington is not a yellow skinned, yellow legged breed. Its skin is pinkish white, and its legs as well, excepting in the Black and Blue varieties, which have black and blue legs, respectively. In the market the Buff and White Orpingtons are most attractive, with their full, plump bodies, and white or pinkish white legs. The prejudice in favor of the yellow legged fowl is rapidly passing in the presence of the Orpington.

The disposition of the Orpington is quiet and gentle like the Asiatics, and they are consequently easily confined by low fences, which lessens the expense of keeping as well as improving the appearance of the runs. The breed does well in confinement or on free range, and is adaptable to all sorts of climates and conditions. It is better fitted for the cooler zones, however, than for the hotter zones.

The fancier takes kindly to the Orpington on account of the remarkable beauty of the breed. Up to the present time the Buff, Black and White varieties have been admitted to the standard of perfection. It is only a matter of time when the newer varieties will follow. For many years all of the different varieties have been exhibited at our larger shows.

Of course, each variety of the breed has its enthusiastic supporters, who believe that it is superior to the other varieties of Orpingtons. In my opinion it is very largely a question of taste. In the main the varieties are all very similar, and I believe that with good handling any one of the varieties would prove more satisfactory than any other variety with poor handling. What I have stated above is true from either the fancier's or from the market man's point of view. The fancier should only say that, in his opinion, one variety is more beautiful than the others, and the market poultryman should state only that his experience has led him to certain conclusions regarding the merits of the different

varieties for egg and meat production, for the next man will probably have had quite a different experience. However, my personal preference is for the Buff. The color is popular. It contrasts equally well with the green fields of the spring and early summer, or the brown, red and golden tints of autumn.

The relative merits of the different breeds and varieties of breeds offer a great field for difference of opinion and argument but one thing is sure, namely, that any breed or subdivision of a breed is largely what you make it. Conditions are not fixed. Everything is subject to change. Qualities of substantial worth can be bred in or out of any stock.

## THE ASIATICS

The Asiatics are so styled because of the fact that they are supposed to be of Oriental extraction. They comprise the following breeds: Brahmas, Light and Dark; Cochins, Buff, Partridge, White and Black; Langshans, Black and White.

### THE BRAHMAS



**FIG. 87.—LIGHT BRAHMA HEN.** The Light Brahma is our heaviest breed, the standard weights being: cocks 12 pounds, cockerels 10, hens  $9\frac{1}{2}$  and pullets 8. This breed, as well as all the Asiatics, is a feather-legged fowl. Their surface color can be described as white and black, the latter being found in the hackle in the shape of a black stripe running through the length of each feather. The cape is black and white; the tail black. The Light Brahma breeders lay great stress on the color of the primaries and secondaries which should be black with white edging on lower web of primaries. The tail of the female, which is made a distinctive feature, is black with white edging on the two top feathers. The tail coverts are black edged with white,

The Brahmas are becoming a strictly fancier's fowl; they are not popular for general purposes although some claim good laying qualities for their strains. It is a very handsome fowl of commanding appearance.



**FIG. 88.—LIGHT BRAHMA COCK.**

The Dark Brahma has the same general shape as the Light, but is one pound lighter. The general color of both male and female is mottled and resembles the Silver Penciled Plymouth Rock. The predominating color of the male is silvery white with a black tail; the female has a silvery white neck with a broad black stripe running through the middle of each feather. General body color is gray with dark penciling conforming to the shape of the feathers. The tail is black, the two top feathers being penciled on upper edge. The coverts are gray with uniform penciling.



FIG. 89.—PARTRIDGE COCHIN COC

#### THE COCHINS

The Cochin as seen in our showrooms can be described as a big fluffy ball with fluffy legs. We would call them the fancier's fowl since their shape and feathering denotes great skill in breeding. They are of about the same size as the Dark Brahmas except the standard weight for the hen, which is given as 9 pounds. The predominating features of the Cochins are the rounded outlines of different sections, the star point being the cushion which is more pronounced in the female.

Some of our best colored buff fowls are to be found in the Buff Cochins while the distinctive color and markings of the Partridge breeds is seen at its best in the Partridge Cochin, male and female.

#### THE LANGSHANS

The Black Langshan is a fowl that from its distinctive shape appears to be a very tall fowl. This, in a measure, is dependent more upon its great depth of body and erect carriage than its length. The male has a very long tail which is carried high; the female also carries her tail in the same fashion. A picture of a

Langshan male and female adequately portrays the characteristic carriage and shape of this breed.

The standard weight of the Langshans are: cocks  $9\frac{1}{2}$  pounds, hens 8, cockerels 7 and pullets  $6\frac{1}{2}$ . They are fine layers, especially in winter and their flesh is said to have a very fine flavor.

The White Langshan has the same shape and general characteristics as the Black, but is not so popular.

## BREEDING POULTRY FOR EGG PRODUCTION

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The vital factors in the breeding of fowls for egg production are:

1. To maintain and improve the constitutional vigor of the stock.
2. To increase the normal profitable commercial life of the domestic fowl.
3. To secure a high average sustained yield for a period of two, three or more years.
4. To secure the most profitable distribution of egg production throughout the year.
5. To produce a superior quality of eggs.
6. To increase the number of eggs laid per hen.
7. To secure strong, fertile and hatchable eggs that produce vigorous chicks.
8. To secure the most economical egg production.
9. To improve the market value of the fowl and offspring for eating purposes.
10. To produce an attractive looking fowl that breeds true.

The ten points enumerated above may be accomplished by a careful observation of the laws of breeding, coupled with the best known methods of rearing, feeding, housing and care. No amount of good breeding will overcome poor care and management, and the very best of care and management cannot take the place of good breeding, or overcome the handicap of poor breeding.

The development of a superior strain of fowls for egg production is the result of a slow process of selection and mating of individuals that most nearly approach the ideals toward which we are working.

The first step to be taken in breeding for egg production is to start with a foundation stock of one of the modern improved pure

breeds, of which there are many available at the present time within driving distance of nearly every farm in New York State.

#### CHOOSE A GOOD VARIETY

The breeds and varieties differ as regards size, shape, color, rate of development, number and quality of eggs laid, seasonal distribution of egg production, constitutional vigor, broodiness, disposition, activity, foraging qualities, proportion of edible parts, etc.

No one breed or variety combines all the desirable qualities developed to perfection. All are capable of improvement. The variety that it is best to select is the one that most nearly meets the particular requirements of the breeder. Whether or not any particular breed will best meet our requirements will depend, to a large extent, upon whether or not we breed and handle that variety in the best possible manner to make use of its most pronounced desirable qualities. If breeds are to be compared and rated with regard only to their meat producing qualities, the Mediterranean, Dutch or Belgium types of fowls, represented by the Leghorns, Hamburgs, Anconas, Campines, etc., will be hopelessly lost in the race, while the great American class, made up of the Rocks, Wyandottes, Rhode Island Reds, or the Asiatics represented by the Brahmas and Langshans, or the English class including the Orpingtons, and others of somewhat similar type, should prove eminently satisfactory. If only the number of eggs laid per year were to be the chief concern, without regard to the market value of the eggs or cost of production, the decision would be likely to rest with some particular strain of any one of the many varieties of poultry of medium size that have been especially bred for egg production, or for the general purpose, egg and meat production combined. If, however, our ideal is to be the largest financial return for eggs, at the least cost, without regard to the value of the fowl for eating purposes or the use of the chickens for meat production, a variety should be selected that will best combine the qualities to produce the largest number of eggs of the right size, shape and color suitable for the best market; and that will produce the largest possible proportion of eggs during the season of high prices,—one that because of its vitality

and size, will produce eggs at the lowest cost. Such a variety most likely would be found among some of the Leghorn or similar breeds. It does not follow, however, that the Leghorn would necessarily, in all instances, be the most profitable fowl to keep.

The larger the breed, other things being equal, the larger will be the cost of maintenance and hence the higher the cost per dozen eggs, assuming the number and size of eggs and vigor of the flock to be the same. It is manifestly difficult to judge general purpose breeds solely on a basis of the number of eggs laid per year. We should take into consideration the size of the eggs and the proportion produced during the season of highest prices; or the value of the eggs if they are to be used for hatching chickens to be grown for broilers, roasters, or other high priced poultry flesh. It is equally unsatisfactory to have Leghorns competing with Plymouth Rocks, Wyandottes and Rhode Island Reds, on a meat or a general purpose basis.

We can obtain the full money earning value of a breed only when we handle it so as to utilize fully all of its important qualities. For one to undertake to distinguish between the breeds and varieties by singling out one as being the best for egg production, under all circumstances, would be doing a great injustice to a number of other varieties, which, if bred and handled properly, would pay as large a net profit in the year, although this profit might be derived from a number of sources other than egg production.

Whatever the breed selected, it is vitally important that it be of a high utility quality and with this quality fixed to breed true. The various strains of all of our varieties of poultry differ quite as widely as do the varieties of any of the breeds when their laying qualities and constitutional vigor are compared.

#### KEEP A PURE BREED

##### *Pure-Bred Poultry Are More Likely to Breed True*

Probably the most important characteristic of a fowl for breeding purposes is its ability to transmit certain qualities to its offspring. Individuals and strains of fowls differ remarkably in this power. Usually it is only after many years of rigid selection for the particular purpose for which the fowls are bred that this quality

secured. If the birds have been bred for many years for external quality of eggs, for the number of eggs laid, for their plumage color, vigor, longevity or other characters, and if as much care has been used in selecting the males as the females, one may reasonably expect better breeding qualities in the stock as regards their power to transmit either desirable or undesirable characteristics. Pure-bred fowls, because they have been selected for a definite purpose in establishing the variety, furnish the most desirable foundation on which to base further improvement in breeding.

### *They Are More Likely to be Prolific*

The general expectation would be that if fowls possess equal vigor, those that have been bred properly for egg production for a period of years would be more likely to give a higher egg yield than those not so bred. Most of the mixed flocks of fowls are made up of so many different types in their various blood lines, that one would not expect to secure a high general average of production. Mixing blood lines indiscriminately, as is usually the case with mongrel flocks, is likely to result in reversion and lower yields.

### *Superior Quality of Eggs*

The difference in the external quality of eggs, as regards color, shape and size, is vastly superior in the case of almost any of the pure breeds than it is of mixed varieties. From a breeding standpoint, it would require many years of painstaking selection to accomplish the same general result in uniform high quality of eggs if one were to start with mixed varieties instead of pure breeds.

### *Eggs Sell for a Higher Price*

Eggs of pure-bred varieties generally sell for higher prices, assuming them to be of equal freshness and essentially of the same size, because they are usually more uniform in color and shape and possess an additional value for hatching purposes. The superior quality, and hence high price of eggs from pure-bred stock may also be due to the superior quality of chickens for eating purposes because of their tendency to be similar in type and habit of growth.

*It Costs No More to Keep Them*

Assuming that the weight of the fowls and the number of eggs that they lay is approximately the same, it will cost no more to keep pure-bred birds than common stock. The same is true as regards the cost of land, houses, feed, care and management. It is certain that the value of the birds, even to sell for eggs or flesh, is greater than would be the case with common stock; hence the apparent advantage of having pure-bred stock, from a standpoint of economical production.

*Pure-Bred Stock or Eggs Can be Sold for Hatching Purposes*

The highest prices for eggs are secured not because of the intrinsic eating value of the product but because of the quality of the stock that the eggs may be expected to produce. Eggs for hatching generally sell for from two to ten times as much per egg as eggs of similar size, color, shape and freshness from common stock, due entirely to the quality of the chickens that should be hatched. The same may be said as regards the difference in money value of pure-bred fowls of similar size, shape, color, vigor, etc., due to the breeding value of the birds.

If a person has stock and eggs of pure-breds which will command a premium for quality and desirability for breeding purposes, he will be able to dispose of much of his produce for superior prices at a time of the year when — as in the case of cockerels in the fall and of eggs in the spring — he has a surplus, and when, ordinarily, prices of poultry products for consumption are lowest. The sales which a poultryman who has pure-bred poultry can make by judicious advertising, at least locally, generally make an important increase in the gross value of the sales as compared to a similar amount of poultry and eggs sold at the same seasons of the year from common stock, for eating purposes.

*They Possess Better Hatching Qualities*

Other things being equal, one may usually expect to receive a little better results in hatching and rearing if the eggs are from a pure-bred variety of poultry as compared to eggs of equal freshness from common stock and from fowls kept under similar con-

tions. This is because of the greater uniformity in the size of the eggs, nature of the shell and time required for hatching chicks. Eggs from the different breeds differ slightly as to time required for hatching, nature of the shell, etc.; hence the desirability of having eggs of similar quality in incubating in the same machine or under the same hens.

*More Pride Will be Taken in Attractive Looking Stock and Eggs*

A person who has attractive looking stock or products to sell will unquestionably take more pride in it and consequently greater interest, which usually will result in better care. Better care nearly always pays a large dividend in better profits.

Life is too short for a person to begin with stock which is no better than fowls were many years ago. Great progress has been made in the past fifty years in the development of standard bred poultry. In view of the comparatively small cost which will be necessary in order to get started in the keeping of pure-bred poultry, one is seldom, if ever, justified in trying to substitute time for money in the development of a flock of profitable poultry. The easiest way to get the best is to begin at least with reasonably good pure-bred stock which may be purchased in nearly every community at a reasonable price. Having decided upon and having secured a good pure breed, the following ten factors should be observed.

1. SELECT FOWLS FOR CONSTITUTIONAL VIGOR

Since the first step in good breeding is to eliminate the unfit, the foundation of all improvement is good health. Fowls differ in their vitality. Some are physically strong; others are weak. Some are born strong, others weak. Some are strong and later lose their vitality through neglect or misuse. Whatever may be the cause or causes of the weakness, they are unprofitable individuals and should be discarded. Without a robust constitution, fowls cannot eat well, and hence cannot produce flesh or eggs profitably.

The most important factor in the successful handling of poultry is to eliminate from the flock the unprofitable individuals. By so doing one readily increases the net profits per bird and raises materially the average production of the flock. Frequently the

TABLE 1.—FINANCIAL STATEMENT PER HEN BASIS\*

	White Leghorn. Spring selection. Strong.	White Leghorn. Spring selection. Weak.	White Leghorn. Fall selection. Strong.	White Leghorn. Fall selection. Weak.	Barred Plymouth Rock. Fall selection. Strong.	Barred Plymouth Rock. Fall selection. Weak.	Average 3 flocks. Strong.	Average 3 flocks. Weak.	Differ- ence.
	Pen 78	Pen 79	Pen 76	Pen 75	Pen 8	Pen 10	Pen 8, 76, 78	Pens 10, 75, 79	
Number of eggs per hen.....	128.5	131.4	120.4	92.7	125.4	114.4	124.7	112.8	11.9
Value eggs per hen.....	\$2.95	\$3.05	\$2.80	\$1.95	\$3.01	\$2.74	\$2.92	\$2.58	\$0.34
Balance income over feed per hen...	\$1.81	\$1.63	\$1.65	\$0.74	\$1.71	\$1.57	\$1.72	\$1.32	\$0.41
Per cent mortality.....	0	16.87	8.17	31.52	12.54	8.34	6.9	18.91	
Per cent fertility.....	88.1	81.7	86.2	69.	78.8	69.6	84.3	73.4	10.9
Per cent hatching power.....	67.3	67.3	63.4	57.8	52.1	45.5	60.9	56.8	4.1
Average weight in pounds pullets saved.....	3.	3.05	3.67	2.45	4.53	3.48	3.53	2.99	.54

\* From Cornell Reading Course for Farmers, No. 45., *Constitutional Vigor in Poultry Breeding.*

weak, undeveloped and undesirable birds cause sufficient loss to overbalance the profits of the best birds in the flock.

Differences in the constitutional vigor of poultry may be recognized when individuals are studied in detail, section by section, remembering that there is no one distinguishing characteristic, which taken alone, will always prove true. A person must base his best judgment on the composite-assembling of several distinguishing characteristics. This method, if properly applied, will prove sufficiently reliable to make it workable. Animals differ in their constitutional vigor primarily in two respects: first, as to their general behavior; second as to their body characters.

TABLE 2.—FINANCIAL STATEMENT (PER HEN) \*  
(November 24, 1908, to November 22, 1909)

	PROGENY FROM SUMMER SELECTED		PROGENY FROM FALL SELECTED				TRUE AVERAGE		DIFFERENCE	
	WHITE LEGHORNS		WHITE LEGHORNS		BARRED PLYMOUTH ROCKS					
	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak	Strong	Weak
pen.....	20	22	11	13	12	14	.....	.....	.....	.....
parents' pen.....	78	79	76	75	21	23	.....	.....	.....	.....
value of eggs.....	\$3.55	\$3.28	\$2.97	\$3.09	\$3.21	\$2.32	\$3.38	\$3.00	\$0.38	.....
value of gain in weight.....	0.05	0.04	0.07	0.11	0.21	0.33	0.10	0.12	.....	\$0.02
cost of food.....	1.30	1.23	1.31	1.28	1.69	1.58	1.41	1.32	0.09	.....
cost of loss of stock.....	0.08	0.01	0.33	0.11	0.11	0.23	0.12	0.08	0.04	.....
total income.....	3.60	3.32	3.04	3.20	3.42	2.65	3.48	3.12	0.36	.....
total outgo.....	1.38	1.24	1.64	1.39	1.80	1.81	1.53	1.40	0.13	.....
balance profit.....	2.22	2.08	1.40	1.81	1.62	0.84	1.95	1.72	0.23	.....

\* From Cornell Bulletin No. 318, *Constitutional Vigor in Poultry*.

Consistency is again shown in the results set forth in Table 2 on the financial standing of the flocks. The average value of the eggs produced and the balance of profit are greatly in favor of the strong flocks, showing that the selection of the parent stock has stamped its influence on the progeny of the first year, at least.

### Behavior

**Activity.** Birds of high or low vitality show it in their activity. They show their physical vigor by their courage, their intelligent interest in what is going on, and by their running, flying, foraging, scratching and fighting. Birds of low vitality are inactive, tired, do not have good recuperative powers and succumb easily to hardship or neglect. A person who thoroughly understands the distinguishing characters indicating high and low vitality does not

have to look long at chickens to see which are vigorous and healthy and which are weak.

*Crowing, Cackling and Singing.* The crowing, cackling and singing of birds indicate their vitality. The birds having strong vitality usually crow longest, loudest and most frequently. In the early days when cock fighting was a popular pastime, this was one of the common tests of good fighters before entering them

TABLE 3.—FINANCIAL STATEMENT (PER HEN) \*  
(Average for all years)

	TRUE AVERAGE		DIFFERENCE	
	Strong	Weak	Strong	Weak
Pens. ....	76-76- 11-76- 22-69	75-75- 13-77- 23-70	.....	.....
Income:				
Value of eggs .....	3.12	2.67	0.45	.....
Value of gain in weight .....	0.07	0.06	0.01	.....
Outgo:				
Cost of food .....	1.19	1.10	0.09	.....
Cost of loss of stock .....	0.08	0.11	.....	0.03
Total income .....	3.19	2.73	0.46	.....
Total outgo .....	1.27	1.21	0.06	.....
Balance profit .....	1.92	1.52	0.40	.....

\* From Cornell Bulletin No. 345, *A Continued Study of Constitutional Vigor in Poultry*.

In the comparison of all the strong flocks with all the weak flocks (Table 3), the strong hens showed decidedly the more profitable returns. The actual difference in profit when all but fixed and equal charges are considered amounted to 40 cents a hen, or \$400 for one thousand hens, in favor of the strong fowls.

in the battle. Large numbers of birds were picked out for fighting purposes on account of their general appearance. These were placed so that they could see but could not reach the others. They were then allowed to show their crowing capacities (telling what they could do, if they had a chance). Crowing is a challenge to combat. Generally a challenge is not issued unless the challenger feels that he has the strength, endurance and skill to — as Josh Billings expressed it — “back up the crow with.”

Any one may easily verify the accuracy of the crowing, cackling and singing characteristic of fowls as indicating constitutional vigor, by observing them carefully when the strong is in the pres-

ence of the weak. Almost invariably the high vitality birds will crow freely, whereas those of low vitality seldom, if ever, crow. So, too, a flock of hens may be watched unobserved, and it will be found that almost never, will the low vitality birds be singing. They usually will not be laying, or if laying, will not be feeling strong physically.

Cackling is a mating call. It is closely associated with egg production. The best laying condition is also the best physical condition. Singing and cackling are the joyous expressions of good health. The laying hen is the happy, singing, cackling hen. Good health is the first essential to good egg production.

*Gallantry.* This means that the physical vigor of a male asserts itself in his behavior toward the females. Gallantry is an expression of the male's masculine characteristics in assisting and defending the females. A good male generally is generous and courteous toward the females and will call them to eat whatever he finds that is good. Some of the best males have been known to deny themselves on account of this peculiar characteristic.

After observing other important factors a person should watch the males to see the way in which they call the females. For this purpose especially attractive food should be thrown to the flock of females where the males are running with them and can be observed under normal conditions. Usually coupled with the generosity on the part of the male, is his courage in the defense of the flock — fighting anything regardless of size.

Generally, although not always, the most vigorous males, when with a large number of each sex, will carry with them a larger group of the females. For example, let four males of decidedly different degrees of constitutional vigor run with a large flock of females and it will be observed that a larger proportion of the flock may be expected to go with the most vigorous males and a fewer number with the weaker males.

*Early Rising and Late Retiring.* The time fowls spend on the perches as compared to the time in action on the ground or floor, and the time of going to and leaving the roost, are excellent indications of health and vitality and conditions of laying. Fowls that frequent the perches during the day give evidence of being out of condition at least temporarily. Physical weakness is gen-

erally indicated by a desire to rest. When a fowl is out of condition it seeks rest and seclusion, and the roosts generally furnish the most natural retreat. Hens, like people, go to bed when they are sick or tired. The most vigorous, which generally are the most productive birds, are usually the last to go to roost at night. They are also the first to leave the perches in the morning. This is because the fowls possess vigorous good health and good appetites.



FIG. 90. AN ABNORMAL TYPE OF LOW VITALITY.

*The Appetite.* Birds which are physically strong and active have good appetites. They digest their food normally during the night and at the first sign of dawn are down on the floor or out in the field, eagerly searching for food. Good appetite waits on good digestion. The way the birds scratch deep holes in the litter, the eagerness with which they seek food, is a very reliable index of their health. A good appetite associated with rapid growth or heavy egg production, or both, is one of the best indications of good digestion and good health,—a fundamental characteristic of constitutional vigor.



FIG. 91. NOTE THE DIFFERENCE IN THE DEPTH OF BODY OF THE TWO COCKERELS OF THE SAME VARIETY AND AGE.



FIG. 92. OBSERVE THE DIFFERENCE IN THE WIDTH OF THE BODIES, ALSO SHAPE OF THE HEAD, SIZE OF THE COMB AND GENERAL APPEARANCE OF RUGGED DEVELOPMENT.



FIG. 93. OBSERVE THE SAME GENERAL CONTRAST IN TYPE BETWEEN THE BIRDS OF HIGH AND LOW VITALITY AS SHOWN IN FIG. 91.



FIG. 94. NOTE THE SAME GENERAL CONTRASTS IN BODY SHAPE BETWEEN THE BIRD OF HIGH VITALITY AND LOW VITALITY AS SHOWN IN FIGS. 91, 92 AND 93.



FIG. 95. SHOWS PARTICULARLY THE DIFFERENCE IN THE ATTITUDE OF THE BIRD SHOWING HIGH VITALITY ON THE RIGHT, AS COMPARED TO THE BIRD OF LOW VITALITY ON THE LEFT.



FIG. 96. NOTE THE PLUMAGE DEVELOPMENT, SIZE OF COMB, DEPTH OF BODY, SIZE OF SHANK, ETC., OF THE HIGH VITALITY BIRD ON THE RIGHT.

*Fullness of the Crop.* The amount of food found in the crop of birds on the perches at night is a very reliable guide to the health and productive condition of the fowl. The bird of good vitality generally goes to roost with the crop full, whereas birds of low vitality generally have little food in the crop. The amount of food in the crop at night is a fair measure of the appetite of the bird during the day and the demand of the body for food. Regardless of what one may feed birds of low vitality they seldom have much food in the crop. It is always nearly empty. Fowls generally eat no more than their body demands and the demand for food is in proportion to performance as represented by body growth, egg production and exercise.

So much for the general characteristics as indicated by constitutional vigor in the domestic fowl as shown by their behavior.

#### *Constitutional Vigor Shown by Body Characters*

The most important body characters indicating vitality are those of shape, size and weight of the body. Unquestionably there is a very strong correlation between the shape of body and the physical condition of fowls of the same variety. In order that we may see these differences more clearly we must, of course, have strong contrasts between the very strong and the very weak. Frequently one will have to discriminate carefully in order to see the fine distinction between individuals that show moderate and those that show ordinary constitutional vigor. It is, however, comparatively easy for one to observe the body characteristics such as shape and size, when one fowl is decidedly stronger than the other. The body shape that best indicates the vigor of a bird is the natural result of continued low physical condition and inactivity, poor appetite and slow growth. The body is the physical expression of the condition of health. All animals take on certain physical characteristics of body attitude and type that reflect their physical condition and state of health. Low vitality results in abnormal, incomplete or faulty development by which certain parts of the body are out of proportion to other parts. (Fig. 90.) A bird having high vitality has a body shape that indicates large digestive capacity and a full normal development of all parts of the body. For example, a fowl of high vitality generally has a reasonable

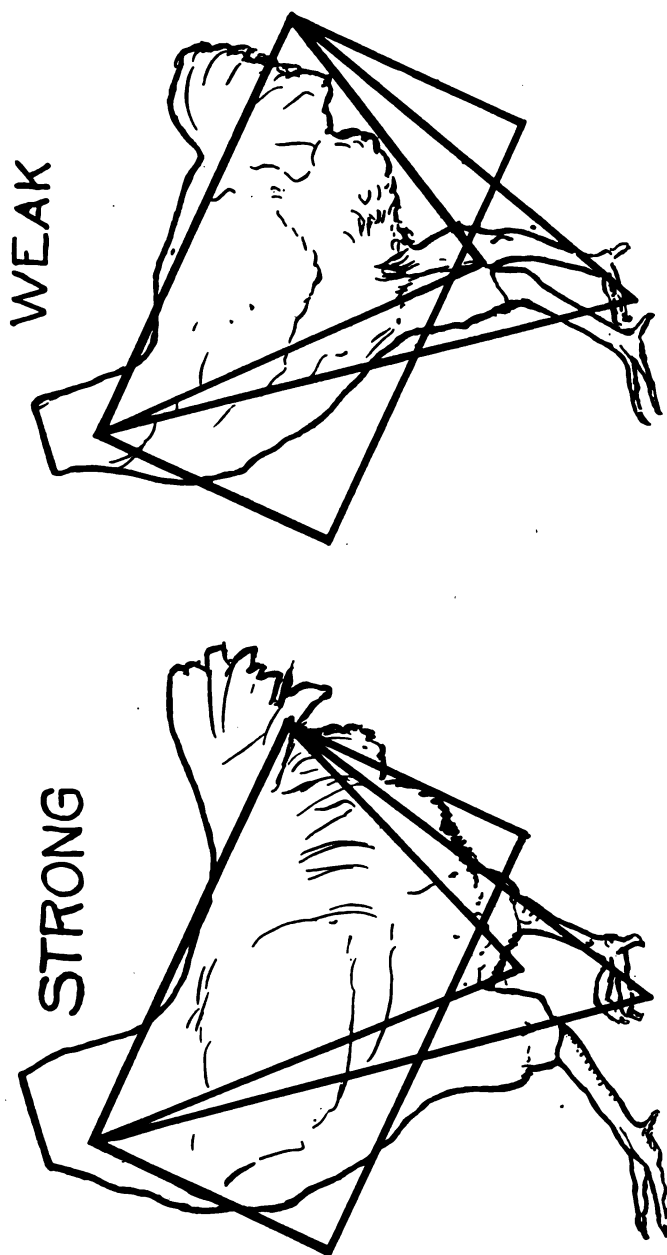


FIG. 97. SHOWING THE WAY IN WHICH BIRDS OF HIGH AND LOW VITALITY FILL A PARALLELOGRAM AND THE TWO TRIANGLES. This clearly brings out the points of weakness in development of keel, breast and abdomen in the low vitality bird.

long keel, a fairly broad back, a deep, full abdomen, full crop and prominent "breast." (Figs. 91, 92, 93 and 94.) A bird having a normal development of all body characters for the variety will have a body shape that in outline, either viewed from the side or rear, will more nearly approach filling a parallelogram; whereas birds of exceedingly low vitality are more likely to have a short keel, narrow body, shrunken breast, tucked-up abdomen, approaching the shape of a triangle. (Figs. 91, 92, 93, 94, 95, 96.)

The modifications of parts through failure to develop normally indicate that the digestive tract is not normal in size or is not functioning properly. A bird normally having high vitality may be temporarily in a condition of low vitality and later recover to the normal condition. A fowl's body shape varies materially from time to time during the year and from youth to old age. Its physical characters may change—in fact normally do change—from time to time during the year to such an extent as to make the bird scarcely recognizable as the same individual. Hence, every bird must be judged by its vigor only at the time of observation. A fowl temporarily out of condition would show many of the characters indicating low vitality. The same fowl, after a period of rest and recuperation, might no longer show low vitality characteristics, but would be judged as a vigorous bird.

High vitality does not necessarily mean high production. Sometimes a fowl may be non-productive, or nearly so, and show the highest possible physical vigor. This is because it has not used up its energy in laying. On the other hand, the highest production may result in producing low vitality at the close of a long period of laying. After a good rest the fowl would be likely to recover her normal body type.

In order to have vividly in the mind's eye bold contrasts in type that may be used to distinguish the physically strong from the physically weak, it is helpful to compare body types with relation to the way in which they have a tendency to fill the outline of a parallelogram or a triangle. (See Fig. 97.) It will be seen that the bird of high vitality has a full development of the muscles that surround the keel, while one of very low vitality generally has very deficient muscular development of the keel. The bird of high vitality usually has a deeper abdomen and a broader back and keel, which nearly fills the parallelogram.



FIG. 98. THE FIRST FOUR AND THE SIXTH CHICKEN, NUMBERING FROM THE LEFT, ARE OF HIGH VITALITY. THOSE MARKED "B" ARE OF THE LOW VITALITY TYPE. NOTE THE COMPARISON.



FIG. 99. NOTE THE SAME GENERAL DIFFERENCE IN BODY TYPE BETWEEN THE CHICKENS OF HIGH VITALITY, INDICATED BY "A," AS COMPARED TO THE THREE CHICKENS OF LOW VITALITY INDICATED BY "B."



FIG. 100. THIS ILLUSTRATION SHOWS FOUR CHICKENS OF THE SAME AGE, REARED TOGETHER IN THE SAME BROODER. THE LARGEST ONE WILL WEIGH AT LEAST FOUR TIMES AS MUCH AS THE SMALLEST.

The shape of the body is as true a characteristic by which high and low vitality may be distinguished in the case of young chickens as it is of the mature fowls. The baby chick having low vitality, like the older fowl, has a hollow breast, tucked-up abdomen and a narrow keel which gives it a triangular instead of a parallelogram shape. (See Figs. 98 and 99.)

*Size and Weight.* Generally the size and weight when considered together are a fair measure of vitality, assuming that birds of the same variety and age are compared. Birds of high

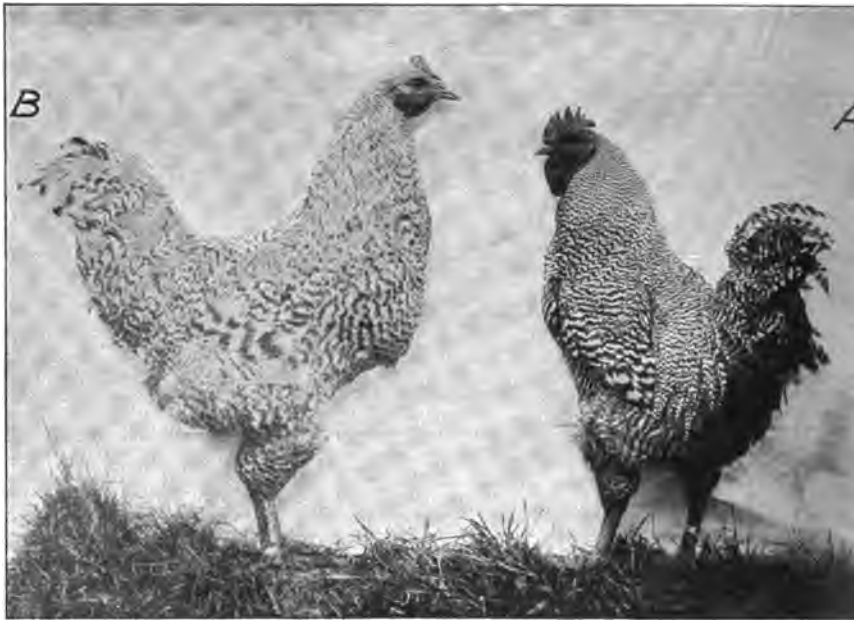


FIG. 101. TWO PLYMOUTH ROCKS. (A) MALE HAVING STRONG CONSTITUTIONAL VIGOR AND MASCULINE QUALITIES; (B) A CAPON WHICH, ALTHOUGH LARGER IN SIZE AND HEAVIER IN WEIGHT, SHOWS A DECIDED LACK OF MASCULINE DEVELOPMENT. SIZE DOES NOT ALWAYS INDICATE VIGOR.

vitality generally grow rapidly, and are large and compact for birds of that variety. (Fig. 100.) Size alone or weight alone, however, would not be a sure indication of vitality. Birds may grow very large in frame and be weak physically as compared to birds of the same variety and age that are smaller, more solid and more active. Therefore, we must not confuse vitality with size or weight alone. We often find birds of medium size and weight

that are more vigorous, more courageous, more gallant, and in every way birds of greater vitality than larger birds of the same age and variety. Birds of high vitality may use up their energy by activity early in life or premature reproduction to such an extent as to prevent large growth; whereas other birds having less vigor and action, simply because they are lazy, phlegmatic and easy-going, will grow large in size. (Fig. 101.) In a test of physical endurance, size and weight are important, but not deciding characteristics. Other factors being equal, such as activity and compactness, the larger and heavier birds would be likely to be superior. We must always couple the performance of the bird with its size and shape and not make the mistake of thinking that the bird is vigorous just because it is large.

In a certain flock of Rhode Island Reds, recently used for demonstration purposes, there was one cockerel that was much smaller and more active than the others. He was selected for his superior constitutional vigor. The owner remarked that this cockerel had made him "more trouble than all of the others in the flock put together." He weighed at least one pound less than the others of the same age and breeding, but nevertheless had more vitality and "pep," and apparent grip on life, than any of the others.

A bird of high quality should possess five principal characters: size, weight, type, reproductive power and action, which, when taken together, represent the true measure of a fowl's vitality. If a male or female is unsexed they may grow larger but will be weaker in action and digestion and more subject to disease. Capons make less efficient use of their food; are less vigorous, are more likely to succumb to hardship than fowls under normal conditions. Nevertheless, they continue to grow large, but in doing so frequently take on characters which indicate physical weakness. (Fig. 101.)

*Head and Beak.* Often there is a correlation between the shape of body, and other characters. In the case of high vitality one is likely to find associated with the solid, compact, blocky body, a broad, round head with a short heavy curved beak, short, thick neck and a similar development of other parts. One would expect to find with the long, thin body, a long, thin neck, thin head

and beak, as compared to the shorter, thicker, rounder head and beak of the bird having high vitality. The bird of decidedly low vitality we speak of generally as having a crow head, which is a long, thin, flat head with a long, thin, flat beak. (Fig. 102.)

If a bird fails to grow well because of low vitality it is finally indicated by a tendency of certain parts to grow out of proportion to other parts of the body. It appears that if any part of the chick is to grow, it will be the beak, toes and wings. These are the parts most needed by the chick to enable it to survive — the feet and wings to enable the chicken to escape from its natural enemies. This is a wise provision of nature.

*Comb, face and wattles.* Large, bright-colored and soft comb

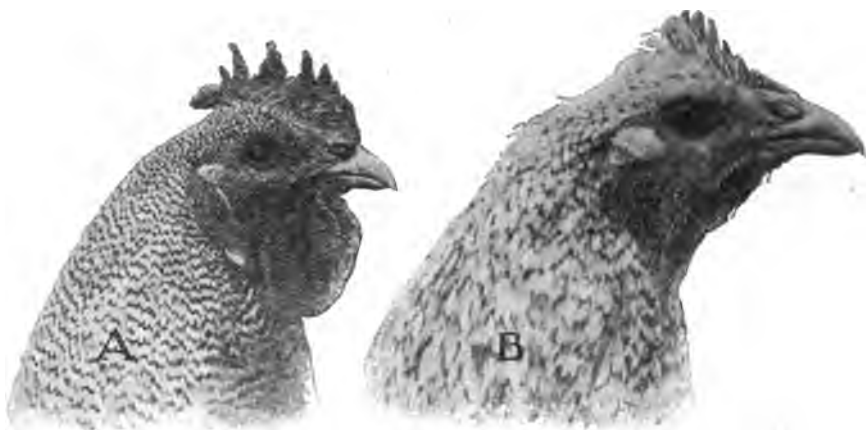


FIG. 102. "A" SHOWS A SPLENDID TYPE OF HEAD AS REGARDS SIZE, SHAPE AND CARRIAGE. "B" IS THE HEAD OF A CAPON, SHOWING THE WAY IN WHICH THE UNSEXING OF THE INDIVIDUAL HAS AFFECTED THE DEVELOPMENT OF COMB, WATTLES, ETC.

and wattles are more likely to be found on birds having high vitality than on those of low vitality. The color of the comb is quite a reliable indication of vitality. It may be said truly that fowls carry their health certificates on top of their heads. One of the symptoms in nearly all poultry diseases is the color and the size of the comb. The size, color and texture of the comb indicates the quality and circulation of the blood. (Figs. 102, 103, 104 and 105.)

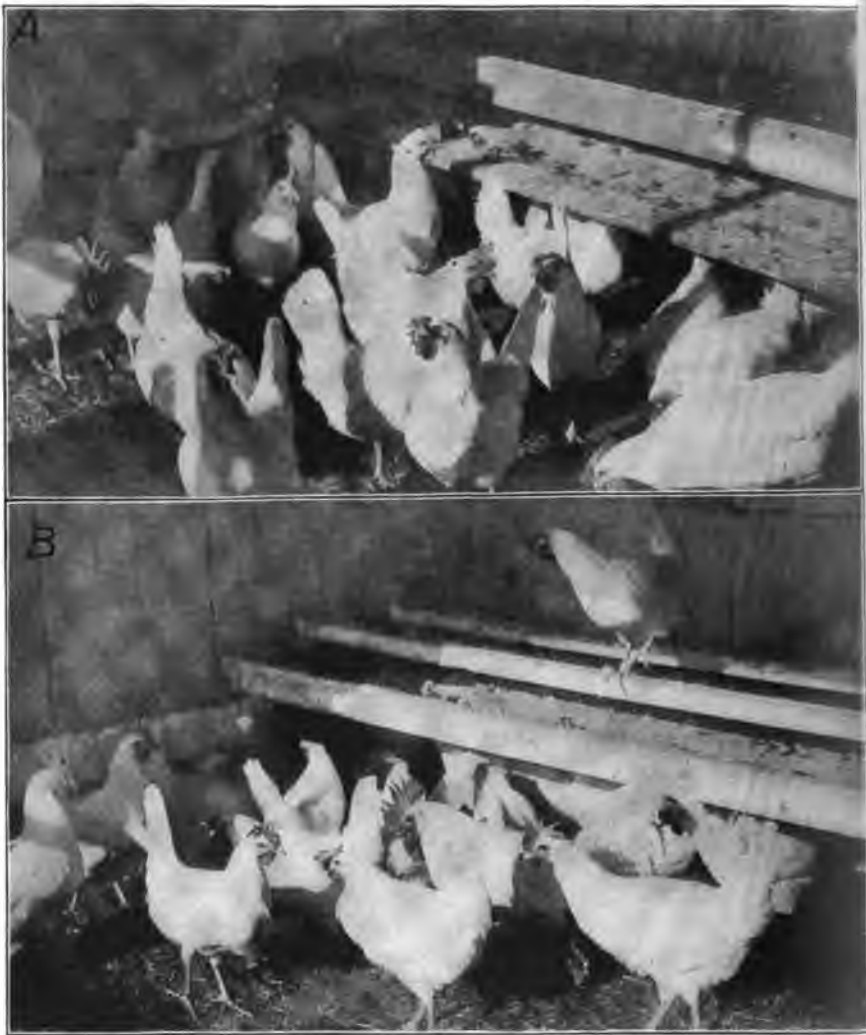
The comb is a secondary sexual character and is almost a perfect indication of the activity of the reproductive system; how-

ever, it is not an absolutely infallible guide. Sometimes a fowl may continue to lay until she has exhausted her vitality to such an extent that it will be shown by a paleness and shrunken condition of the comb. The comb is a better indicator of the physical vigor than it is of the egg producing condition of a fowl. Whatever is true of the condition of the comb as indicating health and production is nearly equally true of the face and wattles and other head parts.

*Eye.* Large, wide-open, bright, round eyes as compared to dull, sunken, droopy ones are exceedingly accurate indications of vitality. The real meaning of this character as an indication of vigor is that good health is seen more quickly through the bright expressive eye than it is, perhaps, by any other single character. A bird of low vitality has tired, sleepy eyes, notwithstanding the fact that they are first to bed and last to rise. (Figs. 90 and 99.)

*Plumage.* The amount, color, rapidity of growth and brilliancy of the plumage is an excellent indication of health and vitality. This is shown particularly in the case of young chickens and fowls during the molting period. Fowls of high vitality molt normally—that is to say, shed a few feathers at a time and quickly grow new ones to take their place, and they complete the molting process quickly. Generally birds of high production continue to lay late in the fall, and therefore do not molt until November or December. In this instance the inherited tendency to produce eggs has, in a measure, overcome their normal tendency to molt. If, however, the birds are of high vitality, as is generally the case, they molt normally and quickly when once the process begins. Irregularly and thinly feathered birds usually are of low vitality. Young chickens that grow their body feathers slowly are generally deficient in vitality. (Figs. 99 and 100.)

The fact that the wing and tail feathers appear to grow out of proportion to the size of the body does not indicate that the feathers grow rapidly—the contrary is true. It indicates that the body has failed to grow; hence the wing and tail feathers are out of proportion to the size of the body as compared to vigorous chickens of the same age and variety. The wings of the latter would be in proportion to the body and very much larger than those of chickens having low vitality.



**FIG. 103. THE FLOCK OF FOWLS SHOWN AT "A" WERE SELECTED WITH REGARDS TO HIGH VITALITY. THOSE AT "B" WERE SELECTED FROM THE SAME GENERAL FLOCK OF PULLETS OF SIMILAR AGE, HAVING THE SAME BREEDING AND CARE, BUT WERE CHOSEN BECAUSE OF THEIR LOW VITALITY. RESULTS ARE SHOWN IN TABLE 1.**

*The condition of the oil gland.* On the rump, at the base of tail, is an oil gland which supplies oil for the plumage. This may be used as an indication of constitutional vigor. A bird of high vitality is likely to have the gland full of oil, which gives to the feathers a shiny, glossy and brilliant appearance. The oil is stored-up energy. The bird lacking vitality has little or no oil, or surplus energy, to store-up in the oil gland, and the result is dull plumage.

In the case of colored or parti-colored birds, those of high vitality grow more color pigment than those of low vitality; hence, the most brilliantly colored plumage can only be found on birds having high vitality and good health.

The length of feathers and the number of feathers is also an important consideration. If we compare fowls of high with those of low vitality we will find that in proportion to their normal weight the birds of high vitality have more abundant plumage. A fowl to have the best feathers must be in the best condition of health.

*Carriage of tail and wings.* The way a fowl carries its tail and wing feathers is a good indication of health. The high vitality bird carries its tail feathers erect in the normal position for that variety. If the bird loses vitality the muscles controlling the tail or wing weaken and they droop. (Figs. 93 and 95.) The tail feathers go to one side which produces "wry tail," owing to the loss of muscular power in the rump. A weak chicken relaxes the muscles.

Fear also affects the carriage of the tail and wings. Courage of vitality go together. One of the best ways to pick out males of high vitality is to put them with the weaker ones. Just as soon as the bird of low vitality comes into the presence of the bird of high vitality each knows very soon which is the better fellow. After a male once finds out that another male is his superior physically, he is filled with fear and shows this by drooping the tail and the wing feathers. He crouches down with fear while the superior male is erect, defiant, courageous, confident and ready to assert his physical superiority. He dominates the situation. The



**FIGURE 104. GROUP "A" ARE THE PULETS HATCHED FROM EGGS LAID BY FLOCK "A," FIGURE 103. THOSE IN GROUP "B" WERE HATCHED FROM THE EGGS LAID BY GROUP "B," FIGURE 103.**

At the time of going into winter quarters, the pullets in Group "A" weighed approximately one-half pound more each than those in Flock B, notwithstanding the fact that all of the chickens were hatched in the same incubator and

courageous bird holds the wing feathers close to the body and carries the tail in the normal upright position characteristic of the variety. (Figs. 95 and 101.)

## 2. BREED FOWLS FOR LONGEVITY

The weakest link in the poultry chain is the short, profitable commercial life of the domestic fowl. Fowls differ in a most remarkable degree in the inherited tendency to live. Under normal conditions the number of individuals of each sex that die, from the embryo within the egg to the time of full maturity of the old fowl, is appalling. The stability of the poultry business depends largely upon our ability to reduce the death rate, and the easiest way to do this is to breed for constitutional vigor by breeding only from the stock that has demonstrated its ability to live long while producing satisfactorily. The winnowing process of time is the most helpful agency in making selection of birds. Time only will tell which are fittest to survive. Fowls carefully selected with regard to vigor and production, and given reasonably good care, may be counted upon to produce satisfactorily for two or three times as long as has been thought profitable to keep them. (Fig. 106.)

Cock birds, other things being equal, are superior to cockerels.

The selection in breeding for longevity should be applied as rigidly to the males as to the females. It is reasonable to suppose that one sex has as great influence as the other in transmitting physical vigor and tendency to long life to the offspring. The tendency of a flock of males to decline physically and to die under the normal conditions of care and mating, is as serious as it is with the hens under similar conditions of care and production. Many males become nearly useless after the first breeding season. Others continue, for many years, to be superior to younger males of the same variety and general breeding. These males should be looked upon as rare individuals of great value in breeding for longevity and vigor, and should be retained while they maintain their vigor and mating powers. The rule should be never to let an older male be supplanted by a younger one except on the grounds of otherwise proven superiority. Other things being equal, the older male should be retained.

The same rule should be applied to the hens as to the male. Great care must be exercised to correctly estimate the physical vigor of all individuals kept for many years, because it is reasonable to assume that a time comes in the life of all long-lived individuals when the physical weakness, due to old age, may overcome the power of transmitting longevity to the offspring.

Generally the mistake has been made of giving the younger male the advantage. The tendency of modern breeding has been to shorten rather than to lengthen the normal life of the domestic fowl. This has been due to the common practice of breeding from pullets because of the belief that the pullet year is generally the most profitable period commercially, hence a large proportion of pullets has been kept; also, because pullets frequently produce a large number of fertile, hatchable eggs during the breeding season, especially when they commence to lay late in the winter or early spring, which is frequently the case. There also has been a tendency to use cockerels rather than cock birds on the assumption — which frequently is true — that the younger birds are the more active.



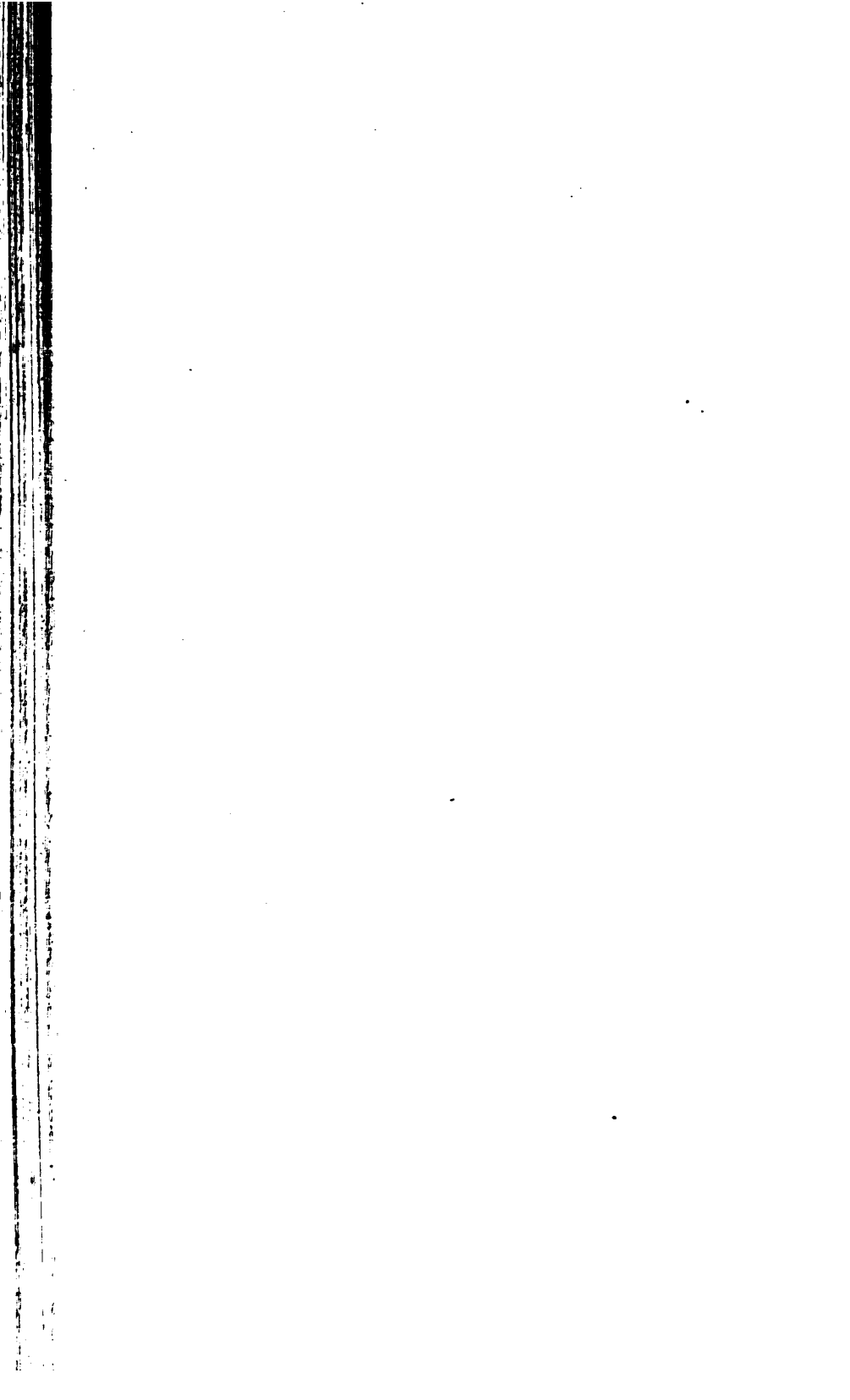
FIGURE 105 SHOWS THREE OF THE HIGHEST PRODUCING HENS THUS FAR BRED AT CORNELL UNIVERSITY.

These birds had completed three years production when the photographs were taken. Their records for four years are shown together with some of fowls having high producing quality in Table 5. They point the way to the development of strains bred especially for high egg production, for a period of years.

Hens, as a rule, are more desirable than pullets for breeding for the following reasons:

1. Other things being equal, hens lay larger eggs than pullets.
2. Hens do not lay as many eggs in the fall and winter as





pullets of the same variety; hence, if properly handled, they should be, theoretically, in better physical condition to produce fertile, hatchable eggs and vigorous chickens.

3. Hens have had a chance to prove their worth as regards vigor, prolificacy, egg qualities, etc. They are mature and should be fully developed when two or three years old.

4. Pullets, even though early hatched and vigorous, are immature, undeveloped and untried at the time of the breeding season. Pullets hatched in April should begin to lay in October or November and when used for breeders in April and May are then only one year old and have an egg laying experience of only five to six months at the most. At this age they have not been through the endurance test of twelve months laying and the molting process to fully test their vitality and egg laying powers; hence have not proven their qualities of longevity, and have not demonstrated their right to be chosen for breeders to perpetuate the race.

5. The highest producing hens lay late in the fall and winter and take their vacation to molt and recuperate during November, December, January and February. They are, therefore, likely to be in good physical condition to produce eggs for hatching during the breeding season.

TABLE 4. DISTRIBUTION OF EGG PRODUCTION BY ONE YEAR PERIODS AS AN INDICATION OF PROLIFICACY. THREE CALENDAR YEAR RECORDS OF 169 S. C. WHITE LEGHORN HENS AT CORNELL UNIVERSITY.

GROUPS.	Number of hens.	Per cent. of total.	Average production, first year.	Average production, second year.	Average production, third year.	Total average production, three years.	Three-year rating of groups.
I.....	80	47.34	158.68	127.60	102.91	389.19	3
II.....	8	4.73	91.00	107.86	115.25	314.13	8
III.....	21	12.43	149.86	111.95	120.38	382.19	4
IV.....	21	12.43	95.48	134.29	119.52	349.29	7
V.....	21	12.43	119.05	133.90	99.38	352.33	6
VI.....	11	6.51	130.45	121.27	138.09	389.82	2
VII.....	1	.59	86.00	54.00	54.00	194.00	10
VIII.....	2	1.18	100.00	129.50	129.50	359.00	5
IX.....	2	1.01	58.50	58.50	63.50	180.50	11
X.....	1	.59	147.00	147.00	132.00	426.00	1
XI.....	1	.59	80.00	72.00	80.00	232.00	9
Total for all groups...	169	100.00	136.92	124.48	109.18	370.57	.....

### 3. BREED TO SECURE HIGH GENERAL AVERAGE EGG PRODUCTION EACH YEAR FOR SEVERAL YEARS

Of equal importance to securing a proper distribution of production each month in the year is the selection of fowls for breeding purposes that lay uniformly high egg yield each year for a period of years. Fowls differ somewhat in their method of distributing their production from year to year. This is shown in Table 7, in which one hundred and sixty-nine hens, whose trap nest records are known for three years, are arranged in eleven groups, showing whether they made their highest, their medium or their lowest production the first, second or third years, and the total average egg yield per hen in the group for three years. It

TABLE 5.—YEARLY RECORDS FROM DATE FIRST EGG WAS LAID OF SOME OF THE  
HIGH PRODUCING HENS AT CORNELL UNIVERSITY

DATE HEN LAID FIRST EGG	Hen num- ber	Name	Eggs laid first year	Eggs laid second year	Eggs laid third year	Eggs laid fourth year	Total four year record
Dec. 6, 1909	3,211	" Lady Cornell ".....	258	200	191	123	†77
Nov. 24, 1909	9,363	" Madam Cornell ".....	245	131	163	83	†62
Nov. 20, 1910	5,697	" Cornell Prolific ".....	243	162	146	119	67
Dec. 8, 1910	5,626	" Cornell Laywell ".....	205	165	159	124	65
Dec. 10, 1909	3,418	" Cornell Supreme ".....	242	198	225	124	*78
Dec. 4, 1908	1,463	" Cornell Suprise ".....	180	186	196	.....	‡56
Dec. 8, 1911	8,686	" Cornell Persistent ".....	192	197	178	.....	§56

\* Fourth year incomplete. Died July 3, 1913.

† Four years complete. Died in fifth year.

‡ Three years complete. Died fourth year.

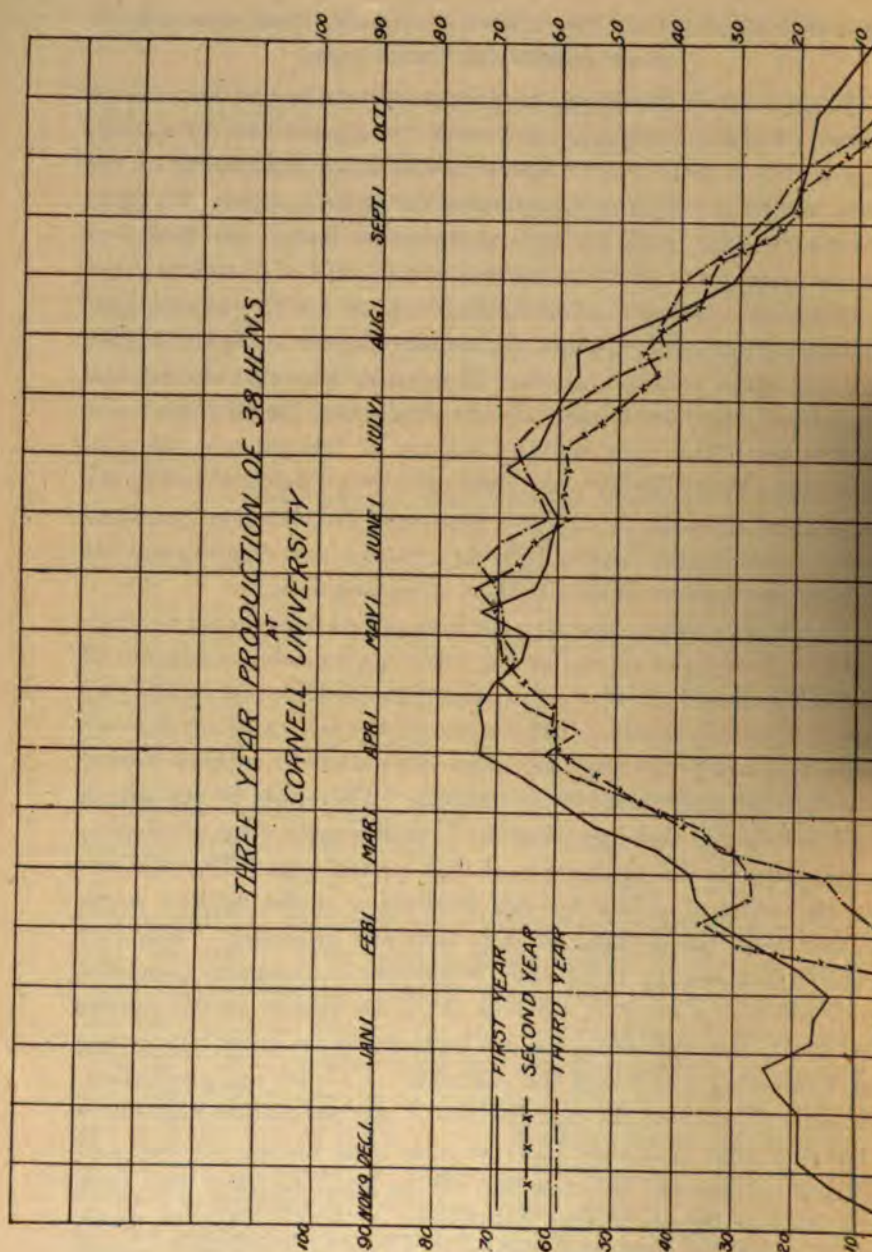
§ Three-year record.

will be observed that in the main the highest producing fowls have laid their best or their medium production in the first or second years and that generally the highest producers have made their best records in the first year. In a few instances, however, hens have made their poorest record the first, their medium the second, and their highest the third. Generally, none of these records give a high total for three years. We have the record, however, of one hen that made the surprising performance of laying one hundred and eighty eggs the first year; one hundred and eighty-six the second, and one hundred and ninety-six the third year a total of five hundred and sixty-two eggs in three years.

#### 4. BREED TO SECURE A PROFITABLE DISTRIBUTION OF EGG PRODUCTION THROUGHOUT THE YEAR

Plotted curves of the egg production of thirty-eight trap nested hens at Cornell University each week for a period of three years are shown in Fig. 106. Observe the striking uniformity of the flow of the curve of egg production at approximately the same time each year, with the general exception that in the first year the average production during the cold months of November, December and January is much higher than for the second year during the same months, and that the second year is slightly higher for the same period than the third year; also that during the months of May, June and July the production for all three years is similar. The most striking feature of this chart is the fact that there is uniformly comparatively low production during the months of October, November, December and January; medium to high production during February, March and August, and the highest production in April, May, June and July.

The great effort in breeding for high priced eggs should be to develop a fixed habit of egg laying under unfavorable conditions of the fall and early winter. A study of the distribution of egg production, reveals the fact that the best layers generally are the only ones that are producing eggs either as pullets or as hens during the late fall and early winter months. Therefore, if one selects and breeds for high egg yield he is at the same time developing a tendency to the production of high priced eggs. The real test of the value of a hen for egg production is the dollar's worth rather than the number of eggs that are produced. When we realize that one egg in October, November or December generally will sell for as much as three of the same quality in the months of April, May and June, we can understand the great importance of developing and fixing the character of winter egg production. A careful study of the distribution of egg production also shows that the hens that have laid the most eggs during the fall and winter months are the ones that lay as many or more eggs than the poor producers during the months of April, May and June. The most important thing to do in selecting fowls with regard to producing high priced eggs is to select the breeding stock in the fall of the year when only the best hens, as a rule, are laying.



These fowls should be observed closely and marked as soon as the fact has become established that they are laying. It is not imperative, however, that a complete record be kept of the number of eggs laid during the fall of the year. It is understood, however, that the more complete the records of any months or of any year, the more accurate the judgment will be in selecting the fall layers. They may also be recognized, usually, by the brightness, texture and size of the comb and wattles, the lateness of their molting, the color of their shanks, the way they eat, and their behavior as indicated in previous paragraphs.

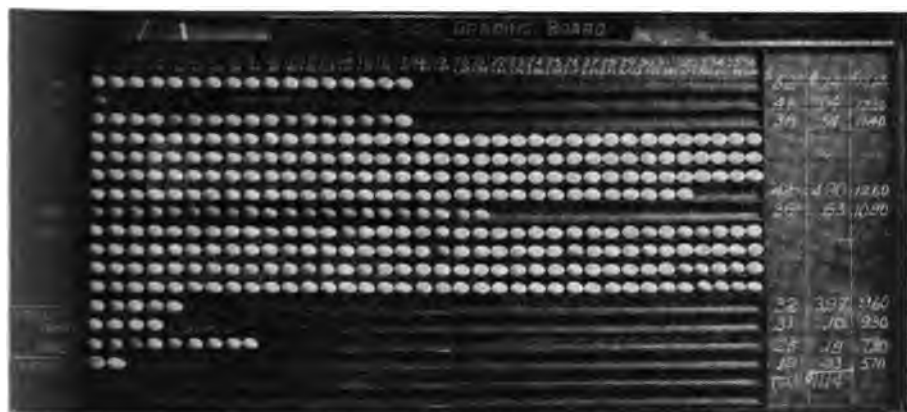


FIGURE 107. SHOWS THE CORNELL EGG GRADING BOARD WITH 30 DOZENS OF EGGS DISPLAYED, ACCORDING TO THE 9 GRADES, 3 SIZES, AND EACH SIZE DIVIDED INTO THREE COLORS. THE FIGURES ON THE RIGHT SHOW: FIRST, THE PRICE PER DOZEN FOR EACH GRADE; SECOND, THE VALUE OF EACH GRADE IN THE CASE; AND THIRD, THE TOTAL VALUE OF A 30-DOZEN CASE OF EGGS IF ALL OF THE EGGS WERE OF THE SAME GRADE AS SHOWN.

##### 5. BREED TO IMPROVE THE MARKET QUALITY OF EGGS

Eggs of the highest quality should be produced because: first, they will sell for higher prices; second, they will produce larger chickens; third, they will be likely to produce chickens that will lay eggs of superior quality; fourth, it is easier to secure a high premium for eggs of choice quality than to sell eggs of ordinary quality.

This may be accomplished by selecting rigidly for quality the eggs used for hatching. The standard should be to establish an inherited tendency in the fowls to lay eggs weighing not less than two ounces and not over two and one-quarter ounces each, per-

fect, typical and uniform as to shape and color for that particular variety of fowl. Eggs abnormally round, long, or showing defect of any other kind, should be rejected.

The importance of selecting for external quality as affecting the market value of eggs is shown in a thirty dozen case of eggs displayed on the Cornell egg distributing board (Fig. 107) into nine definite grades as follows:

1. Large, two ounces or more.
2. Medium, above one and three-quarters and under two ounces.
3. Small, one and one-half to one and three-quarters ounces.
4. Pure white.
5. Uniform brown.
6. Mixed colors.

When eggs are graded according to three sizes, and three colors for each size, the commercial value of these grades, assuming that all are equally fresh and of fairly typical shape, would be as in-

PRICES PER DOZEN FOR EGGS IN LEADING CITIES, NOVEMBER, 1910

GRADES	New York	Phila- delphia	Boston	Chicago	Average
<b>LARGE</b>					
Whites I.....	.52	.35	.46	.35	.41
Browns II.....	.41½	.36½	.46	.35	.39
Mixed III.....	.37½	.32	.46	.33	.36
<b>MEDIUM</b>					
Whites IV.....	.42½	.34	.43	.32	.36
Browns V.....	.35½	.32	.43	.32	.35
Mixed VI.....	.32	.32½	.43	.30½	.32
<b>SMALL</b>					
Whites VII.....	.31	.26	.30	.29	.27
Browns VIII.....	.28½	.25	.30	.29	.26
Mixed IX.....	.21½	.28	.25	.28	.24
Miscellaneous X.....	.19½	.....	.17	.19	.16

licated in the table. Here we see certain grades of small, mixed colored eggs selling for less than one-half as much as the large, pure white eggs. The market quotations on which these calculations were made were New York City prices secured from a number of firms at the same time in the month of December. If fowls lay, as they may reasonably be expected to do, ten to twelve dozens of eggs per year per hen, and if the eggs are uniformly of first quality, they would bring at least five cents, possibly as high as eight or ten cents per dozen more than the same number of eggs of medium to small size and mixed colors. This

would make a difference in the gross value of the eggs of from fifty cents to one dollar per year per hen, which, in many instances, would represent the difference between a large profit or a loss per fowl.

The size of the egg has a marked influence upon the size of the chick.

TABLE 6.—WEIGHT OF EGG TO WEIGHT OF CHICKEN

Eggs	Average weight of eggs	Per cent. weight	Average weight chickens 20 weeks old	Per cent. weight
Small .....	1.66 oz.	100	1.87 lb.	100
Medium .....	1.90 oz.	114	2.29 lb.	122
Large .....	2.35 oz.	141	2.65 lb.	142

These results show that small eggs, 1.66 ounces, produce small chickens weighing 1.87 pounds; that the medium eggs, 1.90 ounces, produce medium sized chickens, 2.29 pounds; while the large eggs, 2.35 ounces, produce large chickens, 2.65 pounds. In other words, eggs that differed by only .69 of an ounce produced chickens which, at five months of age, differed in weight by .78 of a pound or 12.48 ounces. The nearer they reach maturity, the greater is the difference in the size of the chickens, due to the size of the eggs out of which they were hatched.

Stated in percentage proportions and assuming that the small eggs represent 100 per cent., the medium ones 114 per cent. and the large 141 per cent., then the weight of the chickens from the three sizes of eggs would be as follows:

Chickens from the small eggs, 100 per cent.; from the medium eggs, 122 per cent.; and from the large eggs, 142 per cent., showing a nearly perfect relation between the size of the chick and the size of the egg from which it was hatched.

Experiments at Cornell by Professor E. W. Benjamin show that not only will the chicks from large eggs be larger than those from small eggs of the same breed, but that hens laying large eggs, when mated to males hatched from large ones, will produce chickens which will be more likely to lay large eggs than would hens laying small eggs if mated to males that were hatched from small eggs. In other words, the size of the egg is a character that may be transmitted. The observation of persons who have bred to improve the quality of eggs indicates that where care is exercised to use for breeding flocks only such hens as lay eggs which are of the right size, shape and color, and mate them to males that have been care-

fully selected with regard to the quality of the parent's eggs, an improvement of the quality of the eggs is shown in the first and second generations, and that if line breeding is followed systematically, the size of the eggs may be changed in a very marked degree within four or five generations.

Other factors being equal, the larger hens of any given breed are more likely to lay larger eggs than will the smaller hens; hence it is important, when breeding to increase the size of eggs, that hens and males of medium to large size be used.

The fact that the size of the egg that any hen lays increases slightly each year, as she approaches maturity, emphasizes the fact that we must look to hens that are two or three years of age, rather than to pullets, to produce eggs for hatching. However, other factors being similar, large eggs from pullets as compared to eggs of the same size from hens, would have an advantage in the inheritance of size of egg, only because it would be a reasonable expectation that when the pullets reached maturity their eggs would increase in size, thus showing, at maturity, an inherited tendency to lay larger eggs.

Improvement in the shape and color of eggs may be secured in exactly the same manner and with equal assurance of success as in the case of breeding for size of egg.

#### 6. BREED TO INCREASE THE NUMBER OF EGGS LAID PER HEN

While authorities are debating the question as to how egg production is transmitted in the eggs of the domestic fowl, it is perfectly safe to follow the good old rule which has been practiced for centuries, namely, to mate the best producing females with the males that have come from the high producers with the expectation that, in the long run, progress would be made in developing a strain of fowls of higher average producing power than would be likely to occur under the ordinary methods of indiscriminate mating. The fact that a steady, though slow, increase in the average egg production of many of our modern varieties of poultry is the best proof possible that the methods of flock selection have resulted beneficially.

The first step in breeding for egg production is to learn the productive power of the individuals in the flock. This may be accomplished by either of two methods, the expensive, laborious

and essentially accurate method of trap nesting; or by depending upon external characters that are, in the main, fairly reliable indications of the productivity of hens. The making of complete trap nesting records throughout the year is, so far as we know, the only absolute trustworthy method of determining the productive power of fowls. This, however, is not feasible on a large portion of the farms because of the difficulties involved in keeping the records, legbanding the chickens, trap nesting the fowls, pedigree hatching eggs, etc. The trap nests, however, may be used to excellent advantage for short periods of time during certain seasons of the year. This is feasible for a very large proportion of the poultry breeders.

TABLE 7.—EARLY EGG PRODUCTION AS AN INDICATION OF PROLIFICACY. THREE CALENDAR YEAR RECORDS OF 169 S. C. WHITE LEGHORNS AT CORNELL UNIVERSITY

GROUP ACCORDING TO AGE FIRST EGG WAS LAID	Number of hens	Per cent. of total	Average age when first egg was laid	Average produc- tion first year	Average produc- tion second year	Average produc- tion third year	Average total produc- tion for first three years
151-180 .....	4	2.37	176.25	173.25	135.75	126.50	435.50
181-210 .....	71	42.01	199.77	157.01	133.63	116.41	407.03
211-240 .....	52	30.77	232.46	140.10	121.37	106.19	367.66
151-240 .....	127	75.15	208.32	150.60	128.67	112.54	391.81
241-270 .....	22	13.02	255.50	108.10	121.05	108.50	337.65
271-300 .....	11	6.51	285.09	93.91	93.56	84.27	271.74
301-330 .....	6	3.55	315.50	88.33	129.00	107.67	325.00
331-360 .....	1	.59	359.00	45.00	75.00	69.00	189.00
476 .....	1	.59	476.00	27.00	155.00	126.00	308.00
1,110 .....	1	.59	1,110.00	.....	.....	3.00	3.00
241-1,110 .....	42	24.85	299.88	95.55	111.81	99.00	306.36
Total .....	169	100.00	231.08	136.92	124.48	109.18	370.57

The more important points to be observed in breeding to increase egg production are given in the following paragraphs.

Mark the chickens at the time they are hatched and observe the age at which they lay their first eggs. It has been found that other conditions being equal, such as breed, method of rearing, etc., the pullets that lay when they are the youngest, assuming that the methods of feeding are normal, will prove to be in nearly all instances the highest producing birds the first year and for a period of years. The accuracy of this statement is shown by the results secured at a number of experiment stations and is indicated in Table 7, which shows the average egg production of pullets at

Cornell University that began to lay when they averaged 6.9 months old, namely, 150 eggs the first year, 128 the second, 112 the third, a total of 391 eggs in three years, as compared to the pullets that began to lay when they averaged 9.9 months old and produced the first year, 95 eggs, second year, 111 eggs, third year, 99 eggs, a total of 306 eggs, a difference of 85 eggs in three years. The total shows that in the group of early layers there were 127 pullets out of 169, or 75 per cent., so that in this instance approximately three-quarters of the pullets began to lay before they were eight months old. In all probability, as shown by the figures here given for 169 White Leghorn fowls under central New York State conditions and fed on the Cornell ration, hens may be expected to produce one year with another, under normal methods of care, about as indicated in Table 7. These pullets were hatched as they



FIG. 108. SHOWS, FROM LEFT TO RIGHT, FOUR STEPS IN THE DEVELOPMENT OF A STRAIN OF HIGH PRODUCING FOWLS.

1. The nest that traps the hen.
2. The late molting highest producer — Cornell Supreme.
3. The pedigree tray that segregates the chicks.
4. The scales that weigh the eggs and chicks.

usually are in New York State in April and May, except two that were hatched early in June.

Probably the most important step to be taken in the selection of fowls for egg production is to eliminate the pullets that are slow to begin to lay. The rate of development of the pullets under consideration would indicate that if Leghorns are hatched during April and May and are given the best rearing conditions without forced feeding and with an abundance of the right kind of food as indicated by the Cornell method of feeding chickens, he would find that by trap nesting the pullets during October, November and December, he could eliminate in the neighborhood of one-

quarter of his least productive birds. This would greatly increase the general average production and profitableness of his flock. Where persons are not careful in the elimination of immature and otherwise undesirable individuals by physical examination, probably the trap nesting of the pullets for three months in the fall would result generally in eliminating more than one-quarter of the flock.

The third step to be taken in selecting for high production is to discover either by trap nesting or external characters the hens that lay late in the fall of the year. In most instances, as will be seen in the color plate, the birds that lay earliest in the fall as pullets continue to lay latest the following fall. In other words, the individuals that inherit the greatest tendency to lay, and have the strongest constitutional vigor to stand up under heavy egg production, are the ones that respond to the good care and feeding during the most unfavorable seasons of the year.

The best measure of a hen's power to lay is at the time of the year when she is least likely to lay and not during the most favorable seasons. For example, a study of the records of the individual hens in the color plate shows that the fowls having a low yearly egg yield frequently lay as many or more eggs than the highest producers do during the more favorable months of April, May and June.

#### *Some of the External Characters Which Are Helpful in Selecting the Most Productive Birds*

*Late Molting.* The molting season of a flock of fowls under normal conditions covers a period of three or four months in this state, depending somewhat upon climatic conditions, the rations fed, previous egg yield, time of hatching the fowls, etc. In the main, this includes the months of August, September, October and November. A careful molting observation covering many years reveals the fact that the highest producing fowls nearly always continue to lay and molt late, and on the other hand, the lowest producing fowls nearly always molt early. Hence, if one will make a careful selection of the fowls, he will find that almost without exception, those which have not molted and show evidence of strong constitutional vigor are among the highest producing fowls in the flock.

*Paleness of Shanks.* The color of the shank, in the case of yellow shank varieties, is a very reliable indication of the egg producing powers of the bird during the latter part of the laying year in which the observations are made. That is to say, if one will observe carefully the color of the shanks at the close of the laying year, and before the fowl has molted or completed its molt, he will find that the fowls having pale shanks (except in the case of sick fowls) are better producers than those having yellow shanks. The reason for this, apparently, is that the fowls that are heavy producers lay the color out of their shanks and skin. They return to their normal color after the period of molting and recuperation.

*The Width of the Pelvic Arch.* Fowls in a laying condition may be said to be in a condition of pregnancy. This physical condition causes in most animals a softening of certain ligaments and muscles which in a measure modifies their physical conformation. In the case of the fowl the cartilagenous bones which form the arch through which the egg is expelled, enlarges and softens during conditions of heavy laying, and hardens and contracts during periods of dormancy. This condition enables a person to determine at any given time, with considerable accuracy, the hens that are laying at that particular time from those that are not. In the case of large fowls the space between the pelvic bones will be sufficient to place three fingers of average size. In the same fowl, in the dormant condition, the pelvic arch probably would not be more than one to two fingers wide.

*The Size of the Abdomen and the Crop, and the Size, Texture and Color of the Comb Indicate the Condition of Health and Productivity of the Fowl with Fair Degrees of Accuracy.* It may be said that in general a hen in a condition of high production may be expected to have a deep abdomen, a full crop and a large, soft, velvety, bright red comb for that particular variety. The size, texture and color of the comb are an indication of physical vigor. Physical vigor generally is correlated with the active reproductive system of the fowl.

A pullet that is laying has a good appetite and therefore, usually a full crop. The laying fowl has an oviduct that is many times larger than the same fowl will have during a period of

dormancy—at least twenty times as large. The size of the oviduct and the fuller condition of the intestines in the case of the productive fowl enlarges the abdomen to such an extent that frequently, one would find difficulty in recognizing pictures of the same fowl taken at different times of the year during different conditions of productivity and dormancy.

Notwithstanding the fact that the characters enumerated above are, in the main, reliable, we may expect to find exceptions to the rule; for instance, fowls that are nonproductive may have the very highest quality of constitutional vigor with large red combs,



FIG. 109. METHOD OF PAINTING CHICKENS TO DISTINGUISH THE WEAK FROM THE STRONG, SO THAT THEY MAY BE SEPARATED.

full crops, deep abdomens, etc. So too, fowls that are in heavy condition may have somewhat shrunken combs and be paler in color. The accuracy of the characters, however, when all are considered together, fully warrant one in selecting his fowls rigidly by means of external characters, in lieu of trap-nest records.

#### 7. BREED TO PRODUCE STRONG HATCHING EGGS THAT PRODUCE VIGOROUS CHICKENS

One of the most difficult problems involved in breeding poultry is to secure high fertility, strong hatching power and vigorous chicks. Both the constitutional vigor and the inherited tendencies of the fowl play an exceedingly important part in determining

the quality of eggs for hatching. Observations and data available indicate that the male is of as great importance in securing fertile, hatchable eggs as is the female. It has been shown by records made at Cornell, that Leghorn males having high vitality may be expected to mate, during mid-summer, on an average of twenty to twenty-five times per day, whereas fowls of medium vigor mate from ten to fifteen times per day, and males of low vitality from none to five times per day. It was also found, by Mr. R. H. Wilkins, who made these observations, that hens having a record of 100 per cent. fertility during the breeding season mated very much more freely than the hens whose eggs showed 75 per cent. or less fertility.

Selection for constitutional vigor and activity of birds is a vital consideration in the making up of the breeding pens. This can only be determined by close observation of individuals. Generally it is found that the fowls having reasonably good egg production are more likely to give better results than fowls that are exceptionally high or exceptionally low producers. Apparently the excessive production in some instances weakens the fowl to such an extent that it interferes with the fertility and hatching power of the egg. This is particularly true with fowls during their first year of laying. On the other hand, fowls that lay but a few eggs frequently do so because they lack vitality and hence would be expected to produce low fertility and hatching power. The strong producing birds—those that lay above the average and in the neighborhood of 135 to 165 eggs per year—probably would be the ones most likely to give the best fertility and hatching power. (See Table 8.)

TABLE 8. A COMPARISON OF THE FERTILITY AND HATCHING POWER WITH THE EGGS PRODUCED PER HEN

Eggs laid in two years of production	Number Hens	Eggs incubated	Per cent fertile	Per cent chicks to eggs set
175 or less.....	5	58	100	69.
176-225.....	11	194	90.8	56.
226-275.....	27	427	94.0	63.
276-325.....	19	291	95.5	66.
326-375.....	16	241	95.4	58.
376 and over.....	4	64	82.8	42.
Summary.....	82	1,275	93.0	61

#### 8. TO SECURE THE MOST ECONOMICAL EGG PRODUCTION

The cost of producing a dozen eggs depends upon many factors; for example, the cost of land, buildings, labor and — not least in importance — the number and pounds of eggs that a fowl lays and the amount of food that it consumes. In general, it may be said that the larger the number of eggs the fowls lay, the larger will be the amount of food consumed; also, assuming that fowls lay the same number and weight of eggs, other things being equal, the larger birds will consume more feed than the smaller ones. It is important, therefore, from the standpoint of economical egg production, that the fowls be no larger than is necessary to produce for several years the largest number of first quality eggs at the lowest cost.

The tendency of fowls that inherit the quality to lay many eggs to begin laying early in life has the effect frequently of preventing normal growth; hence, we expect generally that, other things being equal, the most prolific individuals will make the least growth, which in turn eventually affects the size of the egg; and, as has been shown, also the size of the chick that is hatched from the egg. The tendency, therefore, is for the abnormally high producing fowls to become smaller and the less productive strains of poultry to become larger unless in selecting the birds we avoid the tendency for the strain to become either too large or too small.

#### 9. TO IMPROVE THE MARKET VALUE OF THE FOWL AND OFFSPRING FOR HATCHING PURPOSES

In New York State we have been accustomed to lay first emphasis of importance upon egg production. The number of eggs that a fowl lays, however, does not necessarily determine the net profit. The size of the fowl, the rapidity of growth, the quality of the flesh, the economical dressing quality as regards waste and proportion of edible parts and the cost of incubating, brooding, fielding and housing are important factors in determining the net profit. This is particularly true where many of the eggs are used for hatching and rearing chickens for broilers, fryers and roasters. While we recognize that certain birds and varieties excel generally as economical egg producers or economical meat

producers, or that they fairly well combine these two principal characteristics, we should consider both the egg-laying and the meat-producing income from all the varieties in determining the money-earning value.

The egg-producing varieties generally have been bred too small for producing the largest net profit. It appears from the information available that a mistake may be made in either of two directions in the development of our egg-laying strains — either that they may be bred too large and coarse, which would be likely to result in lower egg production and higher cost of maintenance, or that they may be under-sized fowls, which cannot withstand the heavy strain of continuous egg production of many large eggs for a period of years. The point where one must sacrifice meat production for the sake of the most economical egg production has not yet been definitely determined. It appears desirable, however, to breed egg-producing varieties to weigh at least three and one-half to four and one-half pounds. This size will provide large meat value without apparently decreasing the economical egg-producing qualities.

#### 10. TO PRODUCE AN ATTRACTIVE LOOKING FLOCK THAT BREEDS TRUE

While placing first emphasis upon the production, growth and constitutional vigor of our fowls, we should not ignore the importance of considering the uniformity as regards color and general body characteristics. This does not imply that a person breeding for egg production or meat production should give first consideration to exhibition quality. He may, however, after selecting his fowls with regard to their constitutional vigor and egg-laying or meat-producing qualities, eliminate from this number such birds as are distinctly different from the others to such an extent that it would impair the attractiveness of the flock, and, if allowed to remain, would be likely to conspicuously increase. There is nothing inconsistent in the development of a flock of fowls that is reasonably uniform in color, shape, size and general appearance if one does not make this the first consideration. It is perfectly clear, however, that a person cannot be true to two ideals at the same time, and make the most rapid progress in fixing the character which he desires most to develop.

In breeding for egg production attention should be given: first, to the vigor of the fowl, and second, to the number and quality of eggs. In breeding for meat production consideration should be given: first, to constitutional vigor; second, to conformation and rapidity of growth, and third, to size. In breeding birds for exhibition purposes, thought must be given: first, to constitutional vigor and second, to standard exhibition qualities.

In exhibition breeding if one is to win, the qualities of egg production or meat production can not be ignored if the breed is expected to survive. Hence, one might better make his chief aim the productive value of his flock and let the other fellow win the prizes if awards are to be based exclusively on standard exhibition points, which up to the present time, have been based primarily upon a "man-made" rather than a "nature-made" ideal. The former ideal is better by far than no ideal and has accomplished marvelous results, but the time has arrived when the man-made standard must be made to conform to nature's standard. This can be done only after much careful experiments to assemble the facts, now only vaguely understood, that correlate type with performance.

Whatever the standard may be, the breeder should keep his ideal uppermost in mind and consider other factors only when the major one has been fully satisfied.

## INCUBATION

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In many respects the hen is still superior to the incubator as hatcher of chickens, but large breeders of all varieties and breeders of non-sitting varieties find it a necessity to hatch the chickens by artificial methods if they are to be obtained in large quantities early in the season.

### BY NATURE'S METHOD

If the natural method of hatching is to be employed, Rhode Island Reds, Plymouth Rocks, Wyandottes, and Orpingtons give the best results. Heavy breeds are too clumsy, and smaller breeds are erratic and excitable. Even in the general purpose breeds there is occasionally an excitable bird that wants to sit, but only sensible and dependable ones should be used, and it is not difficult to discover them after a few days' trial on china eggs.

The success of the hatch depends on the situation of the nest rather than on the hen herself. It should be in a secluded place where the sitter will not be disturbed by other hens or by any other animal. She should be provided with a clean, open nest and have free access to dust wallow, hard grain and fresh water. Best hatches are obtained when nests are made on the moist earth and covered with clean straw. Just before the chickens are due to hatch the nest and surroundings should be sprayed with a strong disinfectant and the hen thoroughly dusted with lime powder. To avoid red mites, all straw should be removed and burned after each hatch, the nest thoroughly disinfected and placed on fresh ground.

### BREEDING STOCK AND CARE OF EGGS

A satisfactory hatch from either hens or incubators depends largely on the condition of the breeding stock which produces the eggs and the care the eggs receive between the time that they are laid and when they are placed in the machine or under the

hen. Eggs should never be kept longer than ten days, and better, not more than a week. They should be kept at a temperature between 45 degrees and 50 degrees if possible and in a dry place. If more than three days elapse before they are set they should be turned frequently to prevent the germ from becoming attached to the shell. To save time in turning, eggs may be packed in a thirty-dozen case and the cover tacked on so that the case can be turned one-quarter the way over every day.

It pays to grade eggs carefully, using only those weighing about two ounces, and those uniform in shape and color.

It is poor policy to hatch more than one breed of chicks in the same compartment of a machine, especially if one of the breeds is Leghorn or Minorca, because they hatch nearly twenty-four hours quicker than other breeds.

When eggs are shipped for hatching purposes they may be packed in regular thirty-dozen shipping cases with chaff, fine sawdust, or bran packed in the filler around each egg and between each layer. When shipping choice eggs in small quantities it may be advisable to use a common market basket, lining the bottom and sides with excelsior and wrapping each egg with excelsior and a thin layer of paper. Pack them very tightly in the basket, cover with a thick layer of excelsior, and over all sew a strong piece of cotton cloth.

When eggs are received after a long shipment they should be allowed to stand twenty-four hours before being set to allow the germ to regain its normal position.

The time required to incubate the eggs of various fowls is as follows:

<i>Kind of Poultry</i>	<i>Time</i>
Hen .....	21 days
Pheasant .....	22-24 days
Duck .....	28 days
Duck, Muscovy .....	33-35 days
Turkey .....	28 days
Goose .....	30-34 days
Guinea .....	26-28 days

If conditions are not ideal the period of incubation may vary a day or two in either direction, though the chickens are bound to be weakened thereby.

Chickens have been hatched from eggs that have been in a temperature of 110 degrees for a short time, and frequently eggs left out of the incubator all night hatch very well.

It pays to hatch chickens early and to run as few hatches as possible. Incubators for general purpose breeds should start February 10, and Leghorns, March 1. It does not pay to hatch chickens after May 20 because eggs are weaker, and though they hatch well, chickens have low vitality and unless given unusually careful attention, can not withstand the hot weather of early June.

#### INCUBATORS

There are three distinct types of incubators — hot water, hot air, and Mammoth machines. There are both good and poor hatchers of all three types.

The hot air machines are most widely used in the east, but the hot water type is more popular in the west. The chief advantage of the hot water machine is that the heat is a little cheaper and it will hold the temperature a long time if the lamp goes out.

The hot air machines can be regulated more quickly and are less complicated.

It pays to buy a high-priced incubator, because quality counts in a machine that is to be used for a long term of years.

The size of the machine should be governed by the size of the breeding flock, but because of economy in labor and cost it is more profitable to buy either the 240 or 390 egg size.

Mammoth incubators are increasing in favor and are invaluable for use in the day-old chick business or custom hatching. They are made in sizes from 1,500 eggs to 15,000 or more. A farmer with many things to take up his time in the early spring can better afford to have his eggs hatched in the Mammoth machine of a neighbor who is competent to run it than to run small incubator himself.

Incubators are sometimes distinguished by the terms "moisture" and "non-moisture." The situation of the incubator should determine the amount of moisture to be used, rather than the

type of machine. Very often moisture is needed in non-moisture machines, and equally often poor hatches are the result of the application of too much moisture in a moisture machine. When incubators are run in a dry room moisture should be furnished during the entire hatch, but if they are run in a damp cellar it may not be necessary until the last three days, and sometimes not at all. The size of the air cell in the egg determines the condition of moisture. At the end of fourteen days the air cell should be about one-fourth of the egg, and on the nineteenth day it should be about one-third. If any greater at either time, moisture should be applied regularly until the chickens begin to hatch. In a non-moisture machine the best method of applying moisture is by spraying the eggs with hot water four times each day until they drip. Spreading wet cloths on the eggs or putting pans of water in the bottom of a machine of non-moisture type may seriously interfere with the circulation of air in the incubator and do more harm than good.

The best place to run an incubator is in a well ventilated cellar where there is the least variation in temperature and where the air is usually laden with moisture. Many house cellars do not receive sufficient ventilation, and unless it can be provided by cheesecloth in windows it would be better to run the machines above ground where they would be provided with plenty of oxygen. A specially constructed incubator cellar should be entirely of concrete. It should be eight feet high, and all windows should be as far above incubators as possible to prevent direct drafts.

#### TEMPERATURE

Many good hatches are ruined because the operator fails to recognize the vital point that oxygen is essential to the growth of the germ from the very first days. Lamp fumes must be carried away and carbon dioxide replaced by oxygen before it is forced through the egg chamber.

The regulation of the heat of an incubator is controlled by a thermostat. They are of two varieties — bar and disk or wafer. The bar thermostat, which is made of metals like zinc, aluminum, and steel, is the most permanent, and is used in most of the best machines. Wafer thermostats are efficient so long as the liquid

that they contain does not evaporate. Operators of machines containing wafer thermostats should test them each year by shaking them to see if the liquid, which is usually mercury or alcohol, is still existing.

Thermometers should also be carefully tested each year by placing them in warm water at a temperature of 103 degrees according to a thermometer that is known to be accurate.

The temperature at which to run an incubator depends entirely upon the situation of the thermometer. If the thermometer is suspended above the eggs, the temperature should be 103 degrees the first 10 days, 103½ degrees the next 7 days, and 104 degrees until they begin to hatch, when it may run to 105 degrees with good results. With the bulb of the thermometer at the center of the egg, it should register ½ degree lower throughout the entire hatching period. It is better that the thermometer should not come in contact with the eggs, because an egg that does not contain a living germ will not register the actual temperature of the incubator.

The incubator lamp should be cared for regularly and the wick trimmed every morning by rubbing off the charred portion with a match or nail. Burn only the very best grade of kerosene, 15¢ fire test, and, to be absolutely safe, provide a new wick for each hatch. The flame is liable to increase just after trimming, and it is always a good plan to return to regulate it half an hour afterwards.

#### HANDLING THE EGGS

When eggs are set they should be placed in the machine early in the morning, as they require from six to ten hours to become thoroughly heated, and after that time it is important for the operator to be present to adjust the regulator and the lamp flame. Eggs should not be disturbed until forty-eight hours after they are placed in the machine. From that time until the eighteenth day they should be turned regularly every twelve hours. When eggs are placed in the trays they should be on their sides, and in turning two rows can be removed, the rest rolled to a new position, and the others returned to another part of the tray. It is necessary to change only slightly the position of each egg.

It is wise to cool the eggs every day. Cooling contracts the

shells and allows more oxygen to pass through them, thus making the germ more vigorous. Eggs should be cooled to a temperature which seems cool when the egg is placed on the cheek or eyelid. During the first ten days the process of turning will cool eggs sufficiently. After that time they may remain out of the machine from ten to forty-five minutes, depending upon outside temperature. A good operator does not leave his eggs while they are out of the machine, because the best man sometimes forgets. Always handle the eggs before touching the lamps, as kerosene fumes will injure the embryo chickens.

#### TESTING

Eggs should be tested twice, the first test on the sixth day being for infertile eggs and brood rings. Infertile eggs are absolutely clear except for a slight shadow, which is the yolk, and may be used for cooking purposes. Weak germs frequently appear in the first test in the form of a ring of blood around the embryo. These eggs may be boiled for feed for the young chickens, provided they can be kept without spoiling. More than 2 per cent. of blood rings in the first test is an indication of weak vitality in the parent stock and is forerunner of a poor hatch.

The second test, which should occur on the twelfth day, is even more important than the first. Every egg that does not contain a strong living embryo should be destroyed. They are easily distinguished at this time, as they show a clear, distinct line of demarcation between the air cell and the growing embryo. The return of a few weak germs that will die within a few days will injure the living germs very materially, because the eggs will soon decay and give off gases that are very harmful.

#### TOWARD THE END OF THE HATCH

On the eighteenth day the machine should be closed until the chickens are nearly all hatched, though if it is necessary to add moisture after that time it may be applied until the first chicken hatches.

In order to prevent chickens from crowding forward, the glass doors should be covered to keep out the light.

Many machines are provided with so-called nursery trays that are about six inches below the egg trays. The wire door in front of the egg trays should never be opened until the chickens are

nearly all dried off, because to allow them to drop into the nursery tray where the temperature is lower before they are dry, is to start them in life under a severe handicap. The nursery tray used after the twenty-first day is a great help, but if used too soon does lots of damage.

When eggs are all hatched remove egg trays with shells and unhatched eggs, and open ventilators in the machine.

The chickens should remain in the incubator until the end of the twenty-second day, when they may be removed to the brooder. When chickens hatch before the twentieth day it is an indication of too high temperature. If the hatch drags along after the twenty-first day, the temperature has been too low or there has been a lack of moisture. In running Mammoth incubators with semi-open bottoms it is advisable to run the temperature one-half degree higher throughout the hatch than in a small machine.

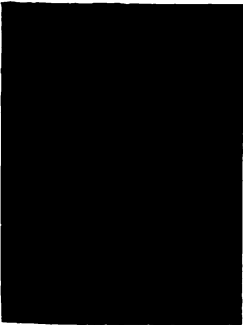
#### CARE OF MACHINE

After each hatch all parts of the interior of the machine should be thoroughly washed in some cresol or formaldehyde solution to eradicate all disease germs. At the end of the season the machine should be emptied out and cleaned, and, if a hot water machine, the water should be drawn off while still hot, so that the tank will be thoroughly dried. When not in use, all machines should be stored in a dry room. To get satisfactory results in artificial incubation year after year, no man can afford to neglect a single point in the care of his machine.

## BROODERS AND BROODING

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The present rapid growth in our poultry industry and the fact that it is becoming more and more intensified and specialized make necessary the use of artificial methods in hatching and rearing. This demand for brooding equipment has resulted in the manufacture of many different types of brooders, all useful under certain conditions and having their advantages and disadvantages. The backbone of poultry keeping is the ability of

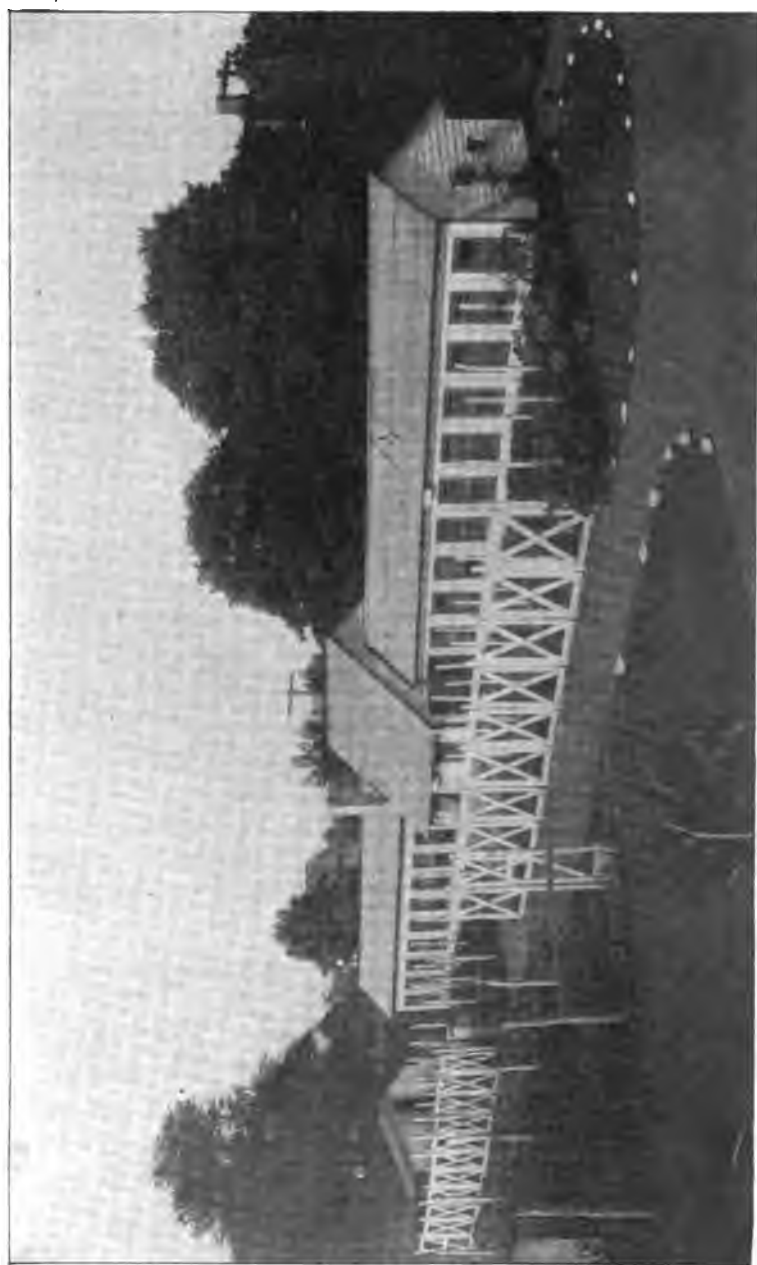
the poultryman to hatch and rear successfully each year pullets enough to replenish his flock; that is, to have enough young birds to take the place of the old ones which are disposed of after they are past their usefulness for egg production. Unless the poultryman can do this successfully it makes no difference how careful he is in feeding and housing or how exact in general management. In choosing the type of brooder to install on the farm the poultryman must consider at least three definite things.

First. The number of chicks which he expects to brood each season.

Second. The season of the year in which he expects to do his brooding work.

Third. The cost of such equipment.

In general, all brooding systems follow one of two distinct plans. The first is the long intensive brooder house which is permanent in nature, usually from twelve to twenty feet in width and from fifty to sometimes several hundred feet in length. The second group comprises what are commonly termed "colony brooder houses." These are essentially portable in nature and range in size from three by five feet up to as high as fourteen by sixteen feet. It is the purpose of this paper to discuss simply the pos-



sibilities of the different types as they fall in these two groups and to offer some suggestions as to their possible usefulness under farm conditions.

#### THE INTENSIVE BROODER HOUSE

The long, permanent brooder house is essentially an intensive system of brooding. It is a type which is especially adapted to broiler raising on an extensive scale. It is also adapted to the production of many hundred pullets for laying purposes. It should be especially considered on any poultry farm where thousands of chicks are to be hatched and brooded to any considerable age. This type of brooder is especially useful where large numbers of chicks are to be hatched in the middle of winter. During the winter the effect of extreme outside variations in temperature can be avoided and the chicks can be allowed a much greater floor space and be kept under more uniform environmental conditions than they can in the so-called colony house.

The long brooder house is rather expensive to build, which is a possible disadvantage, and on account of its design and construction it can rarely be used for anything except brooding purposes. The use of such a system requires the expenditure of a considerable amount of money in permanent equipment which, at best, can be used but a few months of the year. The labor involved in caring for chicks in this system is reduced to a minimum. The chicks are under one roof and, if the brooder house is properly planned and constructed, the labor in caring for and feeding them is small. This is in marked contrast to the widely distributed so-called colony type of brooder. The labor of maintaining brooder temperature in the intensive system is small.

Long brooder houses may again be subdivided into three distinct groups, the division being made according to the method of supplying heat. One system which has been very common in the past is the use of overhead pipes carrying hot water. These pipes are elevated above the floor about eight inches. From four to six pipes about two inches apart usually constitute the radiating surface. These are placed over the rear end of each brooder compartment, and above the pipes a deflector is usually placed. This may consist of a hover board or a frame covered with muslin or burlap. The hover compartment is relatively large and makes possible the

handling of a considerable number of chicks. This type, however, is becoming obsolete, owing to the development of improved methods. The overhead pipe brooder has given great success in the brooding of ducks, and, where it is managed intelligently in an effort to maintain uniform temperature conditions and prevent crowding, it has given fair success in the brooding of chicks.

The second type of long house equipment is known as the circular hover and is sometimes called the mammoth brooding system. Heat is generated by a small stove or furnace located in a



FIG. 111. INTERIOR OF ONE END OF THE LONG PIPE BROODER HOUSE.

Note the depressed alley in the back to make the work of carrying for the chicks easier. The muslin and wire frames covering the hover compartments aid greatly in handling the chicks. The auxiliary heat pipes on the back wall make ideal conditions for midwinter brooding.

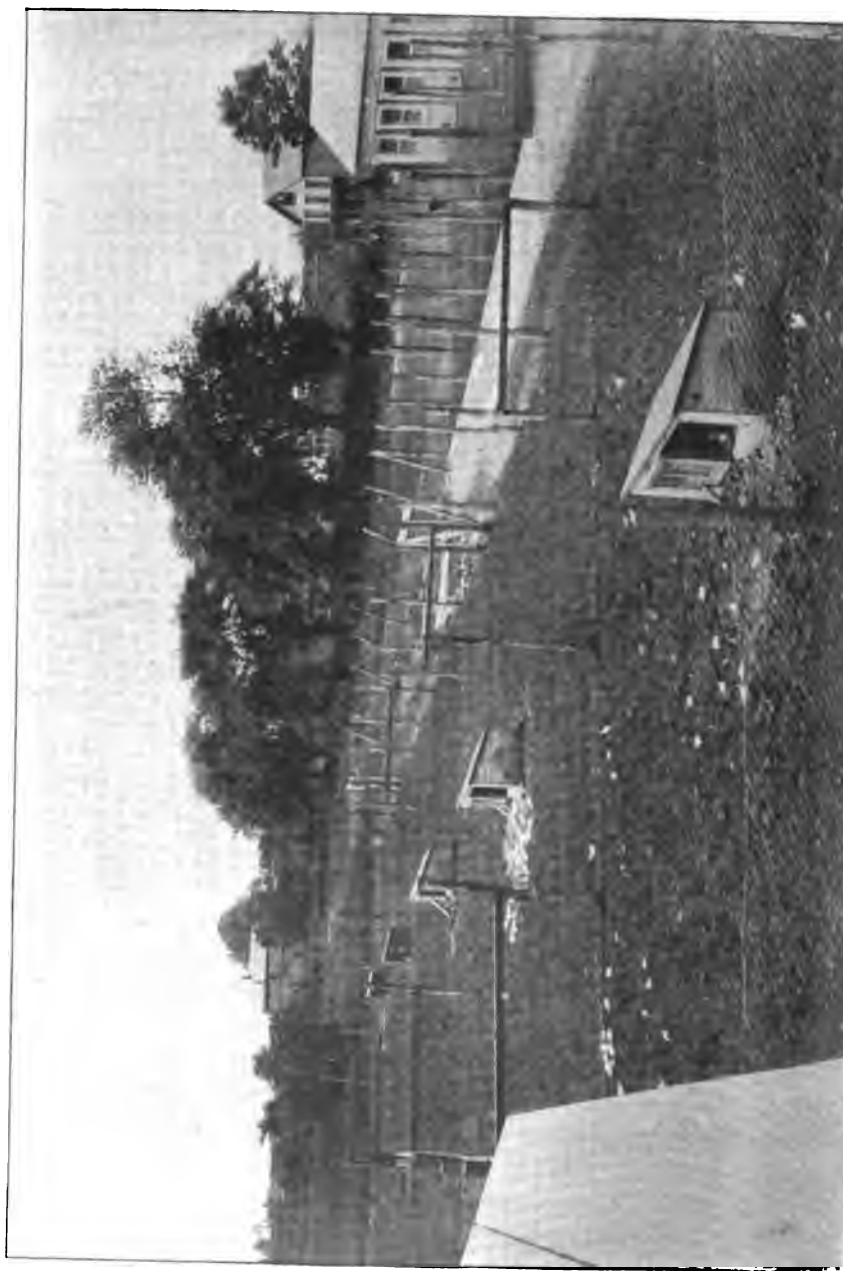
pit in one end of the brooder house. Before the brooder floor, directly under the hovers, is located a box in which four to six hot water pipes are located. These pipes heat the air in the box and the air is in turn allowed to enter the hover through a specially constructed metal drum or pipe. Fresh air is constantly admitted into the heat box from openings in the bottom. This system not only adequately ventilates the hover compartment, but also admits of a very uniform temperature control. The hovers are usually constructed so that they can be raised or

lowered as required. It is the best practice to have the hovers rather close to the floor early in the life of the chicks, and gradually raise them each week an inch or two until they can be entirely removed. A damper is frequently located in the drum through which the heat passes from the pipes to the hover. The damper can be adjusted to regulate the heat very accurately. This method of equipping the intensive brooder house has proved very popular, and is being generally adopted for winter brooding. In this type of brooder it seems quite essential that the air chamber below the brooder floor should be entirely insulated, thus preventing leg weakness and loss of vitality, due to bottom heat. The unit heated mammoth brooder individual circular hover with such as just described, is probably one of the most efficient equipments for long intensive brooder houses. As many as twenty hovers can be heated from one heater, thus making a great reduction in labor.

A third method which is sometimes used in equipping long brooder houses is to install individual brooders. These may be either single or double units. Each unit is heated by a kerosene lamp. The room temperature is maintained at the proper degree by auxiliary hot water pipes placed on the wall of the brooder house. In this system there is always the danger of fire, due to the presence of kerosene lamps. There is also considerable extra labor required in filling and trimming so many small units as contrasted to the one coal burning stove which is used in the mammoth system. The individual brooders are a trifle less expensive to install than the mammoth type, but they are not so efficient. In conclusion it might be said that for late winter or early spring production, long intensive brooder houses, equipped with circular hovers heated from below by hot water pipes, is one of the most efficient equipments available. The investment, however, is relatively great, and will probably be warranted only where early spring broilers or large numbers of early pullets are to be produced.

#### COLONY BROODER HOUSES

Three general types of colony brooder houses exist. In general, the advantages of the colony brooder house are as follows: small original investment in building, ease with which the house is



moved from place to place, and lastly the fact that the houses are adaptable and can be used out of the natural brooding season for growing chicks or during the winter for the housing of small flocks of layers. A small portable outdoor colony brooder is one of the oldest types of brooding equipment. These brooders are usually about three by five feet on the floor and have a capacity of about fifty chicks. The hover is heated by a kerosene lamp. A large amount of labor is required to care for the brooder properly, because all the work must be done out of doors and the brooders are usually considerably scattered. The lamp is rather inaccessible in most types and hard to clean and fill. These brooders are made and sold commercially and are useful to the small suburban poultryman who needs to brood only one hundred or two hundred chicks, and who has not the room or the need for a larger equipment. These small outdoor brooders are undesirable for late winter brooding. It is practically impossible to attend to them properly when the ground is covered with snow and the outside temperature extremely variable.

The second type of colony brooder house is considerably larger, usually ranging from six to eight feet square. The shed roof construction predominates. Such houses can be equipped with one or more adaptable hovers, heated by kerosene lamps. These hovers are usually placed entirely within the house, thus making the care of them easy and more congenial. A house of this size will accommodate from one to two hundred chicks if equipped with two hovers. It is of such size that it can be easily moved from place to place, and can be used for eight or ten females for breeding or egg production during the fall and winter.

The third type may be termed the large flock colony brooder. Such brooder houses range in size from eight to fifteen feet square. The heat may be provided by coal, kerosene, or gasoline. These brooders have a capacity of from 300 to over 1,000 chicks, the number depending entirely upon the type of hover used. The writer has had considerable success with the New York State Gasoline Brooder house as designed and recommended by the Department of Poultry Husbandry at Cornell University. At the present time, however, with the increasing cost of gasoline and the decrease in quality, it is doubtful if there are not more efficient methods of brooding available. During the present season, excellent

results have been obtained by the Poultry Department of the New Jersey Experiment Station, in the use of the so-called brooder stoves. Four commercial types have been tried and flocks ranging from 400 to 800 have been brooded with very small mortality and excellent gain in weight. The great advantage which has been noted is the minimum amount of labor required, owing to the size of the flock and the small investment in equipment. Figure 114 shows houses in which these different types were tested. In general the following conclusions were arrived at:

First. No matter how efficient the brooder, it is generally an unsafe policy to put more than 100 chicks in one flock, due to the possibility of losses through crowding or temperature variations.



FIG. 113. GASOLINE BROODER HOUSES.

The field in front of the houses is covered with a good stand of rye and vetch. The field in back of the houses is seeded to corn. This will provide shade during the summer as well as yield a good crop of corn. These houses can be used for brooding chicks, for rearing growing stock or for special matings of a few birds during the winter.

Second. The results from placing 800 or 1,000 under one hover were excellent up until the fourth or fifth week, but at that age, if the flocks were not divided, an excessive mortality always developed. This mortality was largely due to crowded conditions under the hover and in the house. Where 1,000-bird flocks were divided at three or four weeks and put into two or

three houses of the same size, sanitary conditions being the same in each case, excellent results were obtained.

Third. It was found to be an easy matter to maintain a sufficiently high brooder temperature, even in the very coldest winter weather, with all types of coal-burning brooder stoves.

Fourth. No type was found where the temperature regulator or thermostat would maintain a uniform temperature under the hover. Variations as great as ten and sometimes twenty degrees were noted during a night, if an effort was not made by the poultryman to counteract same by the care of his fire. Heavy winds would always make a fire burn faster and produce a higher temperature than was noted under the same conditions on a calm night.



FIG. 114. LARGE FLOCK COLONY BROODERS.

Each of the five houses in this row contains a 500-chick coal-burning brooder stove. Six hundred White Leghorns were placed in the one in the foreground; the picture shows them at six weeks of age. The mortality for that period was thirty-nine. Each house is twelve by fourteen feet. They are so constructed that they can be used for laying flocks of from twenty-five to forty birds during the winter. This type of brooder has proven very efficient during the past spring.

Fifth. Brooder stoves equipped with large metal deflectors could not be operated with a sufficiently low temperature for late April and early May brooding without letting the fire go completely during the day time. The small coal-burning brooder stoves with a capacity of about 300 chicks were found to be more efficient in respect to per cent. of brood and the vitality of grow-

ing chicks than was the exceptionally large type. Stoves equipped with hovers that could be raised and lowered, showed a material advantage over those with fixed hovers. By raising the hover it was possible to lower the temperature to the desired degree, this feature being especially desirable after warm weather was common in the spring. The great fault in all brooding operations is overheating the chicks. This fault could not be avoided after the middle of April with a great many of the brooders having large metal heat-deflecting hovers. The large colony houses, such as shown in figures 113 and 114, show a great advantage over the small colony brooder houses and the intensive brooder house from the fact that they are portable and can be removed from place to place easily, and hence can be used the entire year as brooder house, as growing house and as laying house.

It has been my idea in previous discussions to point out the good and the bad points of some of our leading and valuable brooding methods. In the following paragraph I shall make a definite recommendation of a scheme which I am sure will work well on most New York farms.

Poultry flocks are usually maintained under two distinct conditions; first, specialized intensive poultry farms and, second, the poultry flock as a side line on the farm. In the former case I firmly believe that the long, intensive brooder house, similar to that shown in figure 110, should be a part of the poultry equipment. If desirable, it may be supplemented by colony brooders. Owing to the desirability of getting early chicks and the possibilities from the brooding of winter broilers, together with the decreased labor required and the efficient results obtained, this type of brooder should receive serious consideration under these conditions.

The New York State farmer keeping a flock of from 100 to 500 birds and brooding each year from 100 to 500 chicks will, I believe, obtain the best results by the use of the large colony brooders, the houses being at least 8 by 8, or better, 10 by 12 feet square. Each house should be equipped with a coal-burning stove with a capacity of about 300 chicks. The houses should be built strong and durable so that they will withstand being moved from place to place. They should be built with some glass and

some muslin in the front so that they can be utilized for laying stock in the winter. Such an equipment can be located in the orchard, by the side of the corn field, or in the pasture. A small amount of labor is required in caring for the heater during the brooding season. After the chicks have obtained such an age that the heat is not needed, the stove can be removed and the house used in the summer for growing birds. The cockerels can be removed at broiler age and such a house will furnish ample space for the rearing of 100 to 150 pullets. When fall comes on, the houses can be drawn together near the main farm buildings and utilized for small special flocks for breeding or laying purposes.

The ultimate measure of a suitable brooder should be: first, efficiency from the standpoint of perfect brooding; second, economy, that is, a small permanent investment; third, adaptability, meaning the continuous use of the equipment.

## REARING CHICKENS

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There are many things that a poultryman must do well to succeed. He may select a ration and know how to feed it; he may have warm, cozy hen houses, and he may have expensive and up-to-date incubators and brooders, and yet not succeed. The thing he must know, however, is how to raise chickens.

There are many things that combine to make the work of brooding the chickens successful. One of the first of these is the man in charge. It takes a man with a liking for poultry, or what some poultrymen call "chicken sense." The man who prefers cows or horses is as much out of place in a hencoop as a Laplander is in a New York hotel. There must be a liking for details. It is the little things that count with chickens. They also require a tremendous amount of patience and close attention — devotion to duty, you might call it. Good business sense has its value, too, for there are many places to exercise it.

The next step in brooding is to see that the chickens come from well matured and vigorous stock. All birds that have had any disease should be discarded. They may seem all right, but for the careful man, the best is none too good. At the same time all poor layers should be discarded. It is a good thing and just as easy to build up the laying qualities as it is the vigor. In fact, they go hand in hand. The best layers are always among the hens that are the most vigorous. They are bound to have good vitality and stamina to withstand the strain of heavy egg production. Think of the tremendous drain it must be on the system when a hen lays more than five times her own weight in one year, as many do.

The fall of the year is the best time to select the birds for the breeding pens. This is the time when the vigorous hen shows up



FIG. 115. COLONY HOUSES SCATTERED OVER A MEADOW NEAR A WOODS. THESE CHICKS HAVE PLENTY OF FREE RANGE.  
Note the weatherproof feed hopper in the foreground.

the best. Select those birds that have large, more or less red head furnishings, bright, full eyes, short beak, well built neck, broad back, deep body, wide pelvic arch, and that stand with their feet widely spread. With good breeding stock on free range from which to draw his young stock the poultryman may rest assured that half the battle is won.

Care must be taken during incubation to see that the eggs are not overheated or chilled. In other words, poor incubation will spoil good eggs, and produce unhealthy chicks. The best poultry man in the world can not succeed with poor chicks.



FIG. 116. SHOWING HEALTHY BREEDING STOCK NECESSARY FOR SUCCESS IN BROODING.

Oftentimes failure to be prepared for the chicks has resulted in loss. All buildings or coops that are to house the chickens should be thoroughly overhauled, cleaned and disinfected. The heating apparatus, whatever used, should be in good running order. In fact, it is a good thing to operate the brooders for a few days previous to the time when the chicks are due. This warms the houses and makes them dry and nice.

Some kind of litter is necessary on the floors of the brooders. Cut straw, chaff, buckwheat hulls or sand is good. If straw is used it must be clipped finely, otherwise the chicks are not able

to scratch in it. The litter is to hide the grain which is thrown in for the chicks and make them work for it. Care should be taken not to use any litter that is mouldy, as it will instantly cause diarrhoea and death. Sand, while it furnishes a good covering for the floor and all the grit necessary, does not always furnish so good an incentive for the chicks to scratch as does straw.

Before placing the chicks in the brooder, it is necessary to leave them in the incubator for about thirty-six hours so they will become dried off, filled out and strong. It may seem, near the latter part of the period, that the chicks are suffering for the lack of food and water, but such is not the case. Nature has looked out for this and has provided the yolk of the egg for this time. Its function is not only to furnish food, but also to regulate the chick's digestive system. Any other food at this time interferes with this operation and is liable to cause trouble for the chicks in the future.

When the chicks are first placed in the brooder, the temperature should be from 90 to 100 degrees, depending upon the brooder and its size. In large brooders where large numbers of chicks run in one flock, more heat is necessary and permissible. In this case the building or room is large enough so the chicks can always suit themselves as to temperature, as the outside of the room is always cooler. Such is not the case in the smaller brooders, and a lower, more even temperature is essential.

Ordinarily, night is the best time to move the chicks to the brooders. The chicks are not disturbed so much in moving and they become accustomed to their quarters more readily. Boards or wires are sometimes placed close to the hover for the first few days to teach the chicks where to get warm, and to save the attendant the almost constant watching necessary to prevent huddling in the far corners.

The chicks will not crowd at night unless diseased, if they have the proper amount of heat. One can rest assured that he has the proper temperature when on lifting the hover at night he finds the chicks lying on their sides along the outer fringe of the hover.

The first food for the chicks should be clean and easily digestible. Our grandmothers fed bread crumbs, and there is nothing better. A combination of bread crumbs and rolled oats slightly

moistened with sour milk is excellent. The ration suggested by the poultry department at the New York State College of Agriculture is good. It consists of the following:

- 8 pounds bread crumbs
- 8 pounds rolled oats
- 2 pounds sifted beef scraps (best grade)
- 1 pound bone meal

The mixture is moistened with sour milk. This ration should be fed sparingly, but frequently. At first, from two to three tablespoonfuls is sufficient for 100 chicks. As they grow older the amount may be increased.

At the same time cracked grain should be fed in the litter, a little at a time. Scratching for this grain gives the chicks something to do and keeps them out of bad habits. There are several good brands of chick grain on the market, but there is nothing better than the following:

- 3 pounds cracked wheat
- 2 pounds cracked corn (fine)
- 1 pound pinhead oatmeal

It is a good plan to feed bread crumbs first and then grain every three hours during the day at the start. Later the number of feedings may be gradually decreased.

Clean water is necessary; also some sanitary receptacle that will hold a quantity without permitting the chicks to drown in it. By removing the handle from a ten-cent eight-quart galvanized iron pail and inverting the pail in a five-cent tin pan of the proper size, a very fine drinking fountain may be made. Of course holes must be made near the top of the pail so that when it is inverted in the pan the water will flow out.

Grinding material is necessary for the chicks from the start. Commercial grit is good, but most people have or can get coarse sand or fine gravel that answers the purpose just as well.

After the first week, if the chicks are not on a grass range, they should be provided with green food. Green cut clover, alfalfa, grass, cabbage, lettuce, sprouted oats or beets are good. At least one-fourth of the chickens' rations should be green food.

After a week or so, a mash similar to the following, moistened with sour milk, should be fed in place of the bread crumbs:

- 2 pounds wheat bran
- 1 pound wheat middlings
- 1 pound corn meal
- $\frac{3}{4}$  pound beef scrap (best grade)
- $\frac{1}{4}$  pound bone meal

During the first six weeks, the number of feedings may be reduced gradually until at the end of that time they are being fed three times per day — grain night and morning and mash at noon. At this time ordinary cracked corn and wheat may be



FIG. 117. CHICKS AT WORK. EXERCISE MAKES CHICKS GROW AND DO WELL.

substituted for the finely cracked grain. Both mash and grain should be placed before the chicks in hoppers all the time from this period on, provided the chicks have free range. It is well to continue one feeding of wet mash a day if it is desired to push the stock to maturity. The idea always in mind should be to keep the chickens growing.

From the time the chicks are three days old, they should have a chance to run on the ground. A grass range is preferred, as there is something about the earth that gives them strength; furthermore, free range gives the chicks something to do and

aids in keeping them in a healthy condition. Do not be afraid to let the chicks run out in the cold weather. They enjoy being out, provided they have a good warm place always accessible.

If the chicks go into the brooder strong and healthy, and later many begin to have drooping wings and toe-pulling starts, it is an indication that the chicks have not been handled right. In nine cases out of ten, the chicks have been overfed and have not been made to exercise enough. The only thing to do is to furnish something that will attract their attention and make them work. Bran in small boxes, pieces of bacon rind, shredded cabbage or slices of raw onion thrown in from time to time during the day are good to keep the chickens stirred up and active. The best chickens are the ones that are racing up and down their pen or are ever busy in the litter.

As the chicks grow older, the heat in the brooders should be reduced. However, if the brooding is done in the early spring, some heat should be retained for seven or eight weeks. It is surprising how much better the chickens do when they have this extra heat during wet days and cool nights.

Care must be taken that the number of chickens in one brooder does not become too large. This often happens when a large percentage of chicks has been raised and grown well. Overcrowding will cause them to sweat and take cold, and roup is the result in midsummer. Besides, the weaker chicks are trampled upon and not given an equal chance. Small colony houses of any shape, about eight feet square, with plenty of windows for ventilation, make excellent summer houses, especially if placed in an orchard or near a wood where the chickens can have a shady range. A location on the bank of a running stream is good. There should be not more than fifty or seventy-five birds in each house. Perches should be provided so that the stock will learn to roost. Roosting is better for them, as it is healthier and cleaner and there will be less tendency toward wry tails and crooked breastbones.

The brooders should be cleaned each week from the first. Nothing aids disease and vermin like filth, but with regularity in cleaning and the use of some powerful spray, no lice need be feared. Crude carbolic acid and kerosene, in the proportion of one to four, is good, also any of the cold tar products.

## FEEDING FOR EGG PRODUCTION

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Farmers' Institute Lecturer

Few poultrymen recognize the importance of becoming thoroughly acquainted with feed analysis and feed values in order that they may compound their rations with intelligence. Given the best kind of stock, comfortably housed, no man can obtain profitable results year after year unless he adopts scientific methods of feeding.

To do her best, a hen must receive a well-balanced ration; that is, her ration must contain protein, or muscle and energy-producing feeds, and carbohydrates, which are fat-forming and heat-producing feeds, in quantities to correspond with the amount of these elements which is consumed in restoring waste tissue, producing an egg and, in winter especially, generating heat.

If poultrymen would only study carefully the close relationship between the food consumed and the product desired, and note the similarity in their chemical composition, the importance of the properly balanced ration would be instantly demonstrated. Then, note the wide variation in protein, ash and carbohydrates in the analysis of the common poultry feeds, and again the importance of the balanced ration is made evident. Let it be understood at once that no man can boast of an egg-producing ration that is superior to all others. So many little things enter into this question of feeding, such as age of birds, breed, warmth of the poultry house, season of the year and method of feeding, that what might bring heavy egg production from a flock of Leghorns in a warm house in December would result in disaster to a flock of a neighbor's Wyandottes in a cold, exposed house in March.

Fowls are natural grain eaters, and any flock of hens would thrive on three feeds a day of corn and wheat with no other food available; but the egg production of that flock would be extremely light, because neither corn nor wheat contains so much protein as eggs, to say nothing of supplying that which is necessary to develop energy for digesting the grain and laying the egg.

On the other hand, fowls fed nothing but ground grains and meat foods would soon get out of condition because of the high percentage of protein and the lack of carbohydrates and mineral food, and also because the fowls' digestive organs require a certain amount of exercise that would not be obtained when they are given only quickly-digested foods.

It is said that a laying hen requires a nutritive ratio of about one part of protein to four of carbohydrates. This statement can be used as a working basis for balancing a ration for a flock of heavy layers, but some feed should be available at all times to enable the fowls to balance their own ration to a certain extent, because the amount that a hen eats is bound to vary from day to day.



FIG. 118. MAKE HENS WORK FOR THEIR SCRATCH GRAIN.

#### DRY VERSUS WET MASH.

The above is one of several reasons why a dry mash kept before the hens in a self-feeding hopper is more satisfactory than a wet mash of the same material fed only once each day.

For stimulating a quick egg production or for an occasional feed on a cold winter day, there is nothing so satisfactory as a palatable warm mash moistened just enough to make it stick together. For regular feeding, however, poultrymen are almost unanimous in adopting the dry mash method of feeding because

it saves labor, gives every hen an opportunity to eat all the ground feed she wants, and, because of the nature of the food, prevents any hen from overeating.

Experiments have proved that a continuous feeding of wet mash induces digestive disorders in fowls that are apt to overeat, and results in a heavier mortality than when fowls are fed chiefly on a dry mash. Conversely, many hens are not able to get enough mash to provide them with the necessary amount of protein for a maximum egg production when it is available only for a few minutes once each day. If a wet mash is fed regularly, it should be given at noon, as if fed in the morning it is apt to develop laziness in the flock. At night, no matter what the system of feeding may be, hard grains should be fed in unlimited quantities to keep the birds' digestive organs active well into the night, thus generating a certain amount of heat to keep the birds comfortable on the roosts and also to keep the organs busy as many hours of the day as possible.



FIG. 119. SPROUTING OATS ON THE GRANARY FLOOR.

Generally speaking, laying hens should consume about half as much mash by weight as hard grains. In early winter this can be accomplished only by careful manipulation of the grain ration, and in the spring fowls will of their own accord eat

nearly as much mash as whole grain, because of their normal egg production at that time. Everything depends upon the palatability of the dry mash, if it is to be fed successfully. If too bulky, it will lose part of its value as a concentrated food; if too fine, it will not be relished by the birds. Meat scraps should make up nearly one-fourth of the dry mash and they should be very finely ground and of high quality, containing not less than fifty per cent. protein, and as much more as possible. As a source of animal protein, high grade meat scraps are more to be desired than any other manufactured meat product, because they are more palata-

ble, less dangerous to feed, and they provide the cheapest protein of that nature obtainable. Freshly cut bone makes an excellent meat food; but, as it contains only about fifteen per cent. protein, it is rather expensive at more than one cent per pound, and chiefly valuable for its stimulating effect on the egg-producing organs.

Dry mash hoppers should be opened at nine or ten o'clock, and the feed left available for the hens the remainder of the day. If hoppers are open from early morning, there is a possibility that some birds will eat too much mash and too little hard grain.



FIG. 120. SELF-FEEDING HOPPER FOR DRY MASH.

Skimmed milk and buttermilk are both valuable for the same reason, and they are especially effective if fed sour. When either milk or freshly cut bone is fed in liberal quantities, only about half as much meat scrap is necessary in the dry mash. Because of its stimulating power, freshly cut bone should be fed very sparingly, never more than half an ounce per bird each day.

#### HARD GRAINS

Four factors should govern the selection of hard grains to make up the other two-thirds of the poultry ration — chemical analysis, palatability, digestibility and cost. Wheat and corn seem to appeal to the fancy of every fowl more than any other grain. Wheat, oats and barley, with over nine per cent. protein, have equal chemical value, but in the other three points rank in the order given. At the same price, winter wheat is preferable to spring wheat, being more digestible. Heavy oats are exceedingly valuable as an egg food; but, owing to the large percentage of indigestible hulls, should be fed in rather limited quantities. Oats weighing less than thirty-six pounds to the bushel are a snare and a delusion, and should be avoided. All these facts can also be applied to barley, and because of their similarity they

should never be fed together. Corn and buckwheat are essentially fat producing; but the former, because of its cheapness, palatability and digestibility, is in a class by itself. Buckwheat does not have the value as feed for poultry that it is generally credited with. Western corn is better cracked because it is more easily digested and because the hens are forced to exercise more to find it.

Although sunflower seeds are rather expensive, they have a special value in the fall when hens are moulting and every poultryman ought to raise enough to provide his flock with a generous percentage of sunflower seeds in the grain ration during October and November.

Peas and beans are very high protein feeds, but not at all relished by the hens, although occasionally a flock has learned to like cowpeas harvested and fed with oats, and under those conditions they make a very valuable addition to the ration.

It is impossible to say how much grain should be fed to a given number of hens, because they eat more on a cold day than on a warm one; and, as each hen eats according to her need, an increase of egg production will call for an increase in feed, and vice versa.

#### SOME ESSENTIAL FACTORS

The feeding of hens to increase egg production is an art as well as a science, and the best kind of a balanced ration is of little value if not properly fed. To give them plenty of exercise and to keep them warm in winter, hens should be fed twice each day in a deep litter and the feed should be scattered well to induce the birds to work diligently. Rye straw makes the best kind of litter because of its durability. Oat and wheat straw, dry leaves, dry shredded cornstalks and shavings are good in the order named. The cost of these various materials should go a long way in determining which should be used.

The morning feed should always be of hard grains fed in limited quantities and buried deep in the litter, and it should be available just as soon as the hens are off the roost. If they are given a little less than they want at this time, they will keep active for a long time searching for every particle of feed; and, not being entirely satisfied, they will eat more readily of the dry mash during the day.

The night feed, always of the same combination of grain as the morning ration, should be scattered in the litter two hours before sunset and in unlimited quantities. To be certain that the hens' crops are filled to their fullest capacity, there should be a little grain left in the litter after the birds have gone to roost. This will be very quickly disposed of in the morning. Many poultrymen



FIG. 121. THIS POULTRY YARD LACKS SHADE.

make it impossible for their hens to do their best because of light feeding at night. Although it is possible to overfeed hens and get them too fat, it is more frequent that they are too thin to lay.

While protein and carbohydrates are the principal elements to consider in balancing an egg-producing ration, we should not lose sight of the importance of a liberal amount of mineral matter in the form of ash, which appears in largest quantities in

oats, wheat, bran and linseed oil meal. When hens are laying heavily, a vast amount of ash is required in the production of egg shells, and it is wise at that time to provide commercial cracked bone in separate hoppers. Clean, sharp grit should always be available. It should be hard and insoluble, so that hens will not require very much of it. Grit takes the place of teeth in the fowls, lodging in the gizzard until the particles become smooth and round, when it is expelled, and there must be more to take its place at once. Hens have been known to starve to death with a crop full of feed, because there was no grit in the gizzard to grind



FIG. 122. SPROUTED OATS — THE BEST SUCCULENT GREEN FOOD.

the food. Ground oyster shells must always be provided. Hens eat large quantities of them for the lime which they contain, and there is no danger from soft-shelled eggs at any season of the year if hens are abundantly supplied with grit, shells and bone. There is nothing on earth that will take the place of both grit and shells and do it right, notwithstanding many claims to the contrary.

Hens like a variety of feed in their ration. Feed several kinds, but never make radical changes. If hens are doing well, their feed should never be changed because somebody suggests that his way might be better — it seldom is.

Hens require much water. Especially do they want it the first

thing in the morning and the last minute before they go to roost at night. Water aids digestion. It is very necessary when hens are fed a dry mash. A hen's body is more than fifty per cent. water, and every egg is sixty-five per cent. water. No matter how well fed a hen may be, she cannot lay eggs without water. It is not necessary to give them warm water in cold weather, neither is it desirable that they be obliged to eat ice.

A succulent green food is necessary every day in the year if hens are to be kept in good health, and at a maximum egg production. Succulency in a food means that it should contain all the natural vegetable juices and does not include dry clover, alfalfa or beet pulp. All of these are good feeds but they cannot be used as a substitute for a succulent food. Sprouted oats are in a class by themselves for this purpose, but many poultrymen have no warm place in which to grow them during the winter. Mangel beets and cabbage keep well and supply the demand for a real green food in a most satisfactory manner.

Avoid condiments of all kinds except salt, and that may be used in the mash at the rate of one-half pound to one hundred pounds of feed to make it more palatable.

For a regulator of health, five per cent. charcoal in the mash, and potassium permanganate, one-half of one per cent., in the drinking water, are just as effective as any higher priced remedies.

The following rations are recommended:

*Scratch grain*

300 pounds cracked corn

200 pounds wheat

2 bushels oats or barley

100 pounds or more of cracked corn or buckwheat to be added in cold weather

*Mash*

300 pounds wheat middlings

300 pounds corn meal

250 pounds meat scraps

200 pounds wheat bran

100 pounds linseed oil meal

50 pounds cut alfalfa or gluten

5 pounds salt

## POULTRY HOUSE CONSTRUCTION

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Hens will lay reasonably well in the late spring and summer under almost any conditions of housing, but a profitable poultry business depends almost entirely upon the poultryman's ability to produce winter eggs, and without a properly constructed building this is impossible.

### LOCATION

The situation of a poultry house has much to do with the warmth and comfort of the fowls, and in order to get the full benefit of the early morning sun in winter the building should face either south or southeast. If, as sometimes happens, the lay of the land prohibits a southern frontage, it is more desirable for the above-mentioned reason that the building face east rather than west.

The soil about the house should be well drained, and the building should be slightly elevated above the surrounding land in order that it may get the benefit of good air drainage as well. As far as possible a northern exposure should be avoided, and it is well to take every advantage of shelter from trees or other farm buildings.



FIG. 123. SIMPLE DRINKING FOUNTAIN AND ROOSTS WITHOUT DROPPING BOARDS.

### SIZE OF HOUSE

Much has been written of late concerning the most desirable number of birds to run in one flock, and a practical synopsis of all that has been said seems to indicate that less than 100 birds

in a flock means an increased cost of labor and house construction without a sufficiently increased egg production to warrant it, while more than 500 birds in a flock means fewer eggs and a greater liability of disease which the saving in labor and house construction does not warrant.

The house should be twenty feet wide in order that the hens on the roost may be as far from the front of the building as possible, and also because the more nearly square a building is, the cheaper its cost of construction. A continuous house will care for a given number of hens with less initial cost than a system of colony houses of the same capacity, and the labor in caring for birds housed under one roof is much less than that required for various flocks in colony houses.

At best a hen house contains a much greater cubic air space than is desirable for the fowls in winter, hence it is important

that the building be kept as low as possible without interfering with the comfort of the poultryman or the ventilation of the building. The rear of the house should be not over  $4\frac{1}{2}$  feet and the front 8 to 9 feet. This will allow plenty of head room for any ordinary man in front of the roosts and permit the sun to shine within 18 inches of the rear of the building during the winter.



FIG. 124. SECTION OF FRONT OF IDEAL POULTRY HOUSE.

#### FOUNDATION AND FLOOR

A poultry house deserves a permanent foundation and should therefore be of concrete. A ditch one foot wide should be dug where the walls are to be constructed, to a depth of 20 inches to 2 feet, and filled with cobblestones to within 3 inches of the ground level. This will give the building a firm

base and will prevent the frost from heaving the walls in winter. The walls should be 6 inches thick and 6 inches above the ground.

The floor of the house should also be of concrete because it is most sanitary; it is rat-proof, easiest to clean, dryest and warmest, also cheapest because of its permanency. A dirt floor has the advantage of cheapness in its initial cost, but it requires much time to clean it properly; and, since the birds like to wallow in it to a great depth; the ground becomes foul more than a foot beneath the surface of the floor, making it, after a few years, a constant source of danger from disease. A good, tight board floor is very satisfactory, and it can be cleaned easily and well, but after all it has not the permanence of the concrete floor and, because of the fact that air can circulate freely beneath, it is not nearly so warm in the winter.

Unless a concrete floor is properly constructed, it is sure to be damp and cold. Hence it is important that 8 to 10 inches of cobblestones or cinders be filled in below the floor. If there is any likelihood of water settling under the floor, a double layer of tar paper between the concrete and the porous material beneath will prevent it from becoming damp. Under ordinary conditions where surface drainage is away from the building or the soil is porous the tar paper will not be necessary. Two inches of concrete containing 5 parts gravel, 3 parts sand and 1 part Portland cement will give a strong, durable floor, and a finishing coat of 1 part cement to 3 parts sand will give a hard, smooth, wearing surface. When the floor is completed it should be level with the top of the outside foundation walls.

#### ROOF

The roof is one of the most expensive sections of the house, and that type should be chosen which gives reasonable satisfaction at the least cost. The monitor and half-monitor types are altogether too expensive and too difficult to construct; and, though they do admit more sunlight than other types, it is cheaper to get the light through the front of the house rather than through the roof. The gable or A-shaped roof is also expensive and unless the ceiling of the house is sheathed, which is an unnecessary item

of expense, a large air space is created in the top of the building which makes the house very cold in winter. It is important that the total cubic air space in a poultry house be kept as low as possible, and either the shed roof or the combination short slope front and long slope rear gives the lowest house and also the cheapest roof. The shed roof has one advantage over the combination roof in the fact that its highest point is in the front of the building, which permits higher windows and more sunlight. The roof should be single boarded with matched lumber and covered with shingles or a high grade roofing paper. When the house is 20 feet deep and the shed roof is used, the rafters should be of 2 x 4 x 12 stock, laid 2 feet apart, and supported where they lap in the center of the building by two pieces of 2 x 6 nailed together and supported in the partitions. To avoid a post in the center of the pen for supporting the roof, a truss can be used, bolted through the 2 x 6 at each end as near the partitions as possible.



FIG. 125. INSIDE FRONT OF IDEAL HOUSE SHOWING POSITION OF CURTAIN IN WINTER. FEED HOPPER BENEATH IN POOR POSITION BECAUSE IT IS NOT PROTECTED FROM STORMS.

#### VENTILATION

The ventilating arrangement of a poultry house is the most difficult and at the same time the most important part of the construction work. Ninety per cent. of all poultry diseases can be traced directly or indirectly to improper ventilation. No man can keep hens profitably during the winter unless he understands thoroughly some method of providing fresh, dry air for his birds at all times, at the same time avoiding drafts, overheating and chilling. We should recognize the tendency among most poultrymen to obtain warmth at

the expense of fresh air. It is next to impossible to get both in extreme cold weather, and the man who keeps his birds in good physical condition does not worry about the cold, but aims to keep his fowls well supplied with oxygen, regardless of its temperature. I would not give the impression that warmth is not desirable, but it is true that a cold, dry air in a poultry house is far superior to warm, damp air, and the birds will be healthier and more productive. It is impossible to ventilate a poultry building by the King system or any other standard method because of the type of construction and because the hens do not give off enough heat from their bodies to keep the air in circulation.

Practical poultrymen recognize the fallacy of the all-glass front, with extreme heat on a sunshiny day and a corresponding extreme of cold at night, with the accompanying condensation of air that means a heavy hoarfrost on the sides and ceiling of the house, also frosted combs. The all-open front with no glass has many strong advocates; and, where winters are not too severe, as on Long Island and in New Jersey, for rose comb varieties of fowls it can be used with excellent success, and it surely has the advantage of cheapness.

For the average New York State climate, however, and for the popular single comb White Leghorn, the all-open front is too severe, and a combination of open front with movable cloth curtain and glass windows seems to be most desirable. No matter what dimension the front may be, one-third open, one-third closed and one-third glass is a good rule, and in any pen there should be one square foot open to every ten square feet of floor space. The windows should extend from floor to plate, and the opening should be about  $2\frac{1}{2}$  feet high, and should be at least 4 feet from the floor to prevent any wind from blowing directly on the fowls. The cloth curtain should be of a good grade of cheesecloth tacked to a frame and hinged to the top of the opening inside. Curtains should never be closed tight except in very unusually cold weather or to prevent a cold storm from blowing into the building. It is an excellent plan on very cold winter nights to leave the curtains swung open about ten inches, thus allowing a free circulation of air and throwing it down toward the floor, which will prevent it from reaching the fowls on the roost until it becomes slightly warmed.



FIG. 126. A SIMPLE NESTING ARRANGEMENT — ENTRANCE AT THE REAR, EGGS GATHERED FROM THE FRONT.

The entire house should be single boarded and covered with a good grade of roofing paper and, to give a better appearance, the front may be sheathed with novelty siding and painted. On the rear, stud from within eighteen inches of the floor to the plate, and on the rafters from the plate one foot in front of the first roost, and sheath tightly on the inside as a double protection for the birds at night.

If the plate is of 2 x 4 and is laid on its 2-inch edge, there will be a space of two inches next to the inside boarding that will allow a slight circulation of warm air between the studs and rafters which will act as a blanket between the birds on the roosts and the cold outside boards.

It is very important in summer that the poultry house be kept as cool as possible, therefore it pays to build trap doors 4 feet by 1 foot every 15 to 20 feet next to the plates, both front and rear. These should be sealed tight in winter, but when opened wide in summer will carry off a surprising amount of warm air as it rises to the roof.

At all times avoid the cloth curtain directly in front of the roosts. It creates warmth at the expense of fresh air, and does more harm than good. When roosts are protected by the sheathing suggested no curtain is necessary. If the house is very cold and the birds on the roosts are not otherwise protected, the drop curtain may be used, but at a distance of two feet from the front roosts, and hung loosely to allow air to pass under or around it.

#### DISPOSITION OF THE DROPPINGS

Many good poultrymen are doing away with dropping boards under the roosts and allow voidings to drop to the floor to become mixed with the litter. This, of course, necessitates cleaning the house about every six weeks in winter, but when the poultryman is provided with plenty of straw or other scratching material this system has a distinct advantage over the dropping boards in that it saves labor, is more sanitary, and takes better care of the manure. When dropping boards are used, they should be 30 inches from the floor, and the roosts 8 inches above them. With no dropping boards, the roosts should be 30 inches from the floor, and if they are suspended from the rafters by iron rods and not allowed to touch the building at any other point, the problem of fighting the red mites will be reduced to its lowest terms.

#### NESTS

Nests should be built on the wall and partitions rather than under the roosts. Under these conditions they are much more sanitary, and it is easier to keep them free from vermin. Nests should be 14 inches square and closed tightly in front and on the top, allowing hens to enter only at each end of an 8-inch alleyway, which should extend the entire length of the nests. They should be covered with a sharply sloping roof to prevent hens from standing upon them. A long, hinged door in front, dropping down, makes it very easy to gather the eggs.

#### DUST WALLOW

Hens must be provided with a dust wallow, and, to prevent dust from flying in the house continually, also to save floor space, the dust wallow should be built as a lean-to on the front of the build-

ing in the space beneath the open front. A sloping roof of glass will keep this compartment dry and warm, and it should be connected with the main building only by a door large enough to allow a hen to pass through comfortably.

#### ECONOMIC ESSENTIALS

A very satisfactory drinking fountain consists of a table 18 inches high with circular holes large enough to allow 10-quart galvanized iron pails to set half way into them. This provides a fountain that is cheap and easily cleaned, cannot be tipped over, and never is soiled.

All appliances should be set up on legs in order to keep every inch of floor space available. Any poultry building for 200 hens or more ought to be constructed at this present time for 90 cents to \$1 per hen capacity, and the man who pays more is making a very bad investment.

## **SOME COMMON POULTRY DISEASES AND SIMPLE METHODS FOR THEIR CONTROL**

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While it is essential to know the causes and external characteristics of the more common poultry diseases, the poultry farmer must fully appreciate the fact that it is far easier to keep the infection out of his flock, thus preventing disease, rather than trying to cure it after having become established. Strong, vigorous birds; clean, well ventilated houses; and plenty of clean and wholesome food material all go towards insuring health. The object of this paper is to call attention to a few of the more common and preventable diseases, followed by a description of their symptoms, with simple and profitable methods of treatment.

In general there are two methods of treating sick birds—one known as the flock method, the other as the individual method. The flock method is possible in houses where a large number of birds seem to be out of condition, or affected with a simple and easily cured ailment. It is possible in such cases to treat it effectively by doctoring the whole flock at once, either by methods of disinfection or through the feed. A common example is the use of potassium permanganate in the drinking water as a mild internal disinfectant. Individual treatment is necessary where a few chicks in a flock are taken with an infectious disease of a highly contagious and injurious nature. In this case, the individual affected should be isolated from the remainder of the flock, and the house given a thorough disinfecting. If the birds which are removed have the infection only mildly, and are of considerable value, it may be desirable to treat them with an idea of making an ultimate cure. If, however, the disease is highly infectious and the bird of no especial value, it will probably be better in the majority of cases to kill and burn the carcass.

### **CLASSIFICATION OF DISEASE**

The method usually adopted by most authors in the classification of poultry diseases, is that of treating together those diseases which affect coordinate groups of organs: for example, res-

piratory organs, circulatory organs and digestive organs. This is undoubtedly the best classification for the technical study of the subject. It is the purpose of this paper, however, to treat of only a few diseases of the most common type. These diseases are the ones which have most often been called to the attention of the Poultry Department of the New Jersey State Experiment Station during the past four years by the farmers and poultrymen in the state. They do not include one tenth of the known and common diseases. It is the plan here to list the diseases described according to the seasons in which they occur, as follows: spring, summer and winter. In the spring months, white diarrhea, gape worm, leg weakness and cannibalism are common. All of these occur in the young chicks. In addition to these there is prolapsus and cannibalism in adult birds, which will be briefly discussed. During the summer months, liver troubles seem to be quite common, also occasional attacks of limber neck and paralysis. During the winter months, and sometimes as early as November, attacks of chicken pox and canker are very injurious. Frozen combs and their effect on production and fertility are also worthy of consideration at this time. Discussing these diseases briefly, it will be the aim to give the place of infection, the appearance, the possible causes, and a simple method of treatment.

It is recommended that every poultryman have in his library one or two standard works on poultry diseases. The following three are especially recommended:

Poultry Diseases and Their Treatment, Maine Agricultural Experiment Station.

Diseases of Poultry, Doctor D. E. Salmon.

Poultry Diseases, Doctor B. F. Kaupp.

#### DIARRHEA IN YOUNG CHICKS

Digestive disorders in young chicks, resulting in different types of diarrhea, probably cause greater mortality than any other one thing. This type of trouble may be caused by one of two things: first, the affliction may be of an infectious type, in which case it is known as "bacillary white diarrhea." This disease is not only inherited but is highly contagious, affecting the birds seriously during the first few days of their life, the heaviest mortality occur-

ring on about the third day. It is characterized by a white mucilaginous discharge, which gums and sticks up the feathers. To check this trouble in flocks where it is well established, it is best to look back to the mother, since the disease is in one of the ovaries of the adult female, and, the yolks being affected, will in this way pass on to future generations. The only sure method is to weed out the infected hens by the use of a trap nest, and keep only birds which are free from infection. Sour skim milk may be used as a preventive measure on the plant, the bacillus of the diseases being easily killed by a dilute acid. Hence the value of the lactic acid in the sour milk. When brooder chicks become infected with this trouble, it is the safest practice to market them all at an early age, and not run the risk of holding these pullets over as future layers and breeders, for they will usually pass the infection on in future years.

The second type of diarrhea in young chicks is characterized by a more or less hard, brownish secretion, and is commonly termed "simple diarrhea." The usual cause is a lack of stamina and vitality and an impaired digestion, due to a varied temperature in the brooder, and especially to chilling, caused by periods of low temperature. Chicks quickly recover from this type of diarrhea if the cause is corrected, and, if they are gotten into good growing condition immediately, can be used for layers and breeders. The only treatment for this type of the disease is to correct the temperature conditions and get the chicks out on green grass.

#### GAPE WORMS

The characteristic gaping of young chicks, which constitutes an effort on the part of the bird to breathe and to check the irritation in the wind pipe, is caused by small parasitic worms adhering to the walls. When the gape worm once gets established in the ground where many chicks are raised it is responsible for a heavy loss. Where this is the case it is best to discard the ground entirely for chick rearing, moving the brooding equipment to another location, and plowing, planting and liming the infected soil for two or three years, after which time it may be used again with no danger of infection. If only a small number of chicks

are raised and only a few seems to have the gape worm, it is possible to extract same by the use of a horsehair or a commercial gape extractor. This is rather a tiresome and laborious operation, and is not generally recommended.

#### LEG WEAKNESS

Chicks brooded artificially often lose either partial or complete use of their limbs at an age of from two to five weeks. This is commonly called "leg weakness," and is caused by one or all of three factors: first, a hot brooder bottom, due to faulty insulation; second and most common, a damp floor; third, insufficient ash in the rations.

If the chicks appear to be afflicted with leg weakness, the possible cause should be looked into and eliminated. They should be gotten out of doors as quickly as possible on a clean grass run, and a dry mash should be kept before them at all times in small, open pans containing equal parts of wheat bran, granulated bone and meat scrap. With the elimination of bottom heat and any moisture in the floor of the brooder, the condition can be corrected. Birds which have completely lost the use of their legs and have become malformed usually never regain the use of them. Such chickens should be killed at an early age for broilers.

#### CANNIBALISM IN YOUNG CHICKS

Cannibalism in young chicks is especially common with the light, active breeds, if kept in large flocks and closely confined. It is a habit which is acquired when once they taste blood, and, if no preventive measures are taken, a brood acquiring the habit will devour each other in large numbers. To prevent the spread of this malady, remove from the flock any bird showing blood on toes or tail, and pick out the chicks that seem to be especially possessed with the idea of picking toes. Transfer them to a place where they will have a considerable green grass run and provide them with a mixture of equal parts of wheat bran, ground oats, granulated bone and meat scrap. Free range will usually correct this condition quicker than any other measure.

## CANNIBALISM IN ADULTS

In the spring of the year when birds are laying heavily and are more or less weakened due to heavy winter production, the light, active breeds, and in some cases the heavy American breeds, are apt to develop a disease known as prolapsus, or inversion of the oviduct. If affected birds are not removed immediately, the healthy ones will get the taste of blood and begin to devour the prolapsus birds. When once they get the taste of this raw, bloody flesh, they seem to become wild and will pick and start bleeding normal individuals, until, if protective measures are not taken immediately, many deaths may result.

As soon as prolapsus is noted, the flock should be let out of doors, and given a wide range with plenty of green grass and shade. All the meat scrap they can eat should be provided in separate hoppers. Any affected birds should immediately be isolated and any individuals that seem to be especially possessed with the inclination to pick at another should be separated for a short time. To check the prolapsus, it is often desirable to cut down the dry mash ration for two or three weeks and give them a rest, after which it may be increased with no bad result. Free range and plenty of exercise, with normal feeding, are sure preventives of prolapsus; the direct cause of cannibalism.

In discussing the summer diseases of adult birds, the various forms of liver troubles are probably the most common, due in large part to lack of exercise, forced feeding, insufficient variety in the rations and general debility. One of the most common types of liver troubles is that known as jaundice, caused by a checking of the function of the liver. This produces large secretions of bile, and that not utilized in the normal functions is absorbed by the blood. The amount of bile in the blood causes poisoning and the destruction of the red corpuscles. Birds affected with jaundice show pronounced signs of pale comb and listlessness, oftentimes followed by an anæmic condition and many deaths.

Hardening of the liver, enlarged liver and fatty degeneration are quite common conditions, if birds are kept in close confinement and not given an abundance of green food and variety in the rations.

## LIMBER NECK

Of all the summer diseases of poultry, limber neck and paralysis are most common. Every summer sees epidemics of this trouble, especially during warm, dry seasons. Limber neck is commonly caused by poisoning, which results in partial paralysis, and if immediate preventive measures are not put into effect, many deaths will result. Many claim that limber neck is caused by vegetable poisoning, but it is doubtful if that is true to any extent. Some claim that meat scrap not properly cured is responsible in some cases. This is undoubtedly so. It has been the experience of the writer that most of the attacks which occur during the summer are due to the birds getting access to carrion flesh of some type, either dead birds which have not been burned or buried or animals which have been allowed to decompose in the vicinity of the plant. When an attack occurs a careful search should be made for conditions of this kind and the flock should immediately be given large doses of castor oil or Epsom salts. If these measures are promptly taken and the cause removed, a large number of the affected birds can be completely cured. Possibilities of limber neck constitute a strong reason why poultrymen should use more care, especially during the summer, in the disposal of dead animals of all kinds.

## CHICKEN POX, ROUP AND CANKER

During the winter and late fall there are three diseases which are quite common in poultry flocks, and which are more or less associated. These are chicken pox, roup, and canker. It is undoubtedly true that these three afflictions are very closely related, the chicken pox or sore head being more prevalent among young chickens from broiler age to maturity. Roup and canker are especially prevalent in pullets when they are just about reaching maturity, and during damp, wet weather in the winter. These contagions are probably more common in the east than all other diseases combined, and hence it is hoped that the following brief discussion as to prevalence, prevention and cure will be of practical benefit to the poultry industry.

*Form of the Disease.*—No positive difference between the various forms of diphtheria, roup and chicken pox has been

found, other than the particular location in which the infection occurs and the percentage of mortality in the different forms.

When the wattles, ear lobes, comb and portions of the head covered with skin are affected, the condition is usually called chicken pox, or sore head. In such cases the affected portion usually becomes much inflamed, resulting in the formation of scabs or exudates of dried pus which is largely composed of broken down tissue. These crusts or scabs appear very much like pimples or warty growths, in some cases so large as almost entirely to close the eye when the eyelid is affected. This type of the disease seems to be especially common during the fall of the year on pullets approaching maturity, and it is especially prevalent during continued spells of damp weather and in locations adjacent to large bodies of water, or in river valleys, which affect the atmospheric moisture conditions.

The term "roup" applies to cases where the mucous membrane of the nasal passages and the adjacent cavities is considerably inflamed. These parts give off a catarrhal discharge or exudate, sometimes watery in character, often becoming solid and forming a dried, pus-like deposit in the nasal cavities. The tissue around the eye is oftentimes pushed out, due to the formation of such a discharge in large masses in the optical cavity. This form of disease seems to be especially prevalent during fall and winter in flocks which are kept in poorly ventilated quarters and where proper precautions are not taken to keep the house clean and sweet.

The diphtheretic form of the disease, sometimes called avian diphtheria or canker, is characterized by the formation of large exudates in the mouth, throat, and sometimes in the air passages and alimentary canal. These organized patches of pus form directly on the inflamed mucous membrane and appear to be attached very firmly to the same. This form of disease seems to be very contagious, and if not properly handled will result in high mortality. It often checks entirely the productiveness of the flock affected.

*Causes of the Infection.*—The exact cause of the above mentioned disease is not well established. It has been attributed to minute one-celled animals called "coccidæ." Some authors claim

that it is caused by the various bacteria, and still others by organisms which are ultra-microscopical in their nature. Whatever the exact cause may be it is obvious from a study of numerous infections that it is highly contagious, most prevalent during the warm, damp weather, and that birds, immature and low in vitality, are much more open to serious infection.

Experiments show that chicken pox is identical with pigeon pox and studies indicate that this form of infection is probably carried from bird to bird by mosquitoes, chicken mites, body lice and other vermin which infest poultry. It has been suggested that mosquitoes can transmit the virus from water or some other source under ideal conditions. The roup and canker forms of the infection are undoubtedly carried from flock to flock by the introduction of diseased birds, the virus being brought on the feet of the attendant from other infected birds. It can easily be transmitted from bird to bird in the same flock through the medium of drinking water, the feeding troughs and hoppers, and undoubtedly through the air in houses which are poorly ventilated and crowded to more than the normal capacity.

#### *Symptoms of these associated diseases*

Colds which begin with watery eyes are usually the primary cause of roup, the first symptoms being a thickening of the discharge and the formation of pus under and behind the eye ball, which gives the eye a puffed or distended appearance.

With chicken pox or sore head the characteristic appearance is small scabs or ulcers about the comb, wattles and face, especially on the eye lids.

The canker form is detected by the formation in the mouth and throat of yellow pus masses. These are closely attached to the mucous membrane of the throat and when scraped off cause bleeding. They are commonly found just in the angle of the jaw, under the tongue and on the roof of the mouth.

#### *Treatment*

It is obvious that the best treatment is prevention. Dr. Pearl calls attention to the following rules for preventing the disease:

1. In introducing new birds always procure them from uninfected flocks.

2. Isolate for two or three weeks all new birds and all birds that have been exhibited at shows to make sure that they do not develop the disease.

3. Exclude from uninfected houses and yards all poultry, animals and persons coming from places that are infected.

4. Do not use implements such as hoes, shovels, etc., that have been used on infected premises.

5. Keep the birds in good hygienic condition, well nourished, and in a dry, well-ventilated house and roomy yards.

When the disease has been introduced into the flock, careful precautions may prevent its spread. The following suggestions may be helpful:

1. Immediately separate from the flock any birds that show symptoms of the disease.

2. Disinfect the yards and houses. A 5 per cent. solution of carbolic acid may be used on the yards. Remove the litter from the houses and disinfect freely. The disinfection of the houses may be followed by whitewash.

3. Use potassium permanganate in all drinking water.

4. Keep watch of the flock so that all new cases may be isolated at once.

5. Burn or bury deep all birds that die.

The disease is amenable to treatment, but this treatment must be individual, and requires a great deal of time. It must be continued once or twice a day for some time. It is therefore very expensive and consequently impracticable for ordinary stock. Moreover, birds apparently cured are likely to become the source of infection for later outbreaks.

*Treatment for Chicken Pox.*—In treating chicken pox, two things should be remembered: first, if a large number of individuals are affected, flock treatment is necessary; second, if only a small number are affected, individual treatment will probably be very satisfactory. Flock treatment is best carried out by spraying the birds at night on the perches with a 3 per cent. solution of carbolic acid or creolin used in a small metal plunger atomizer. The air should be thoroughly saturated with the solution so that it settles down on the face and portions of skin adjacent to the

head and so that the birds will breathe it in. This treatment tends to check the spread of infection, and aids in curing any slightly affected individuals.

In cases where the disease is centralized and only a few individuals are affected, individual treatment will usually cure any but very advanced cases. The crust of nodules should be removed from the infected area and the surface washed with a 5 per cent. solution of creolin, after which it should be dusted with iodoform. When the disease is not far advanced one treatment is usually sufficient. In persistent cases the iodoform should be used daily and carbolated vaseline applied to the affected area. The mortality in serious infection where no treatment is applied may run up as high as 50 per cent., but with proper treatment for prevention and cure it should be very low.

The following methods of treatment are recommended by Harrison and Streit; the one used depending upon the seriousness of the infection and upon materials at hand for treatment.

The best treatment for roup is to place affected birds in dry, cool coops where they can be easily handled, and wash the eyes and face daily for three or four days with a 5 per cent. solution of creolin and peroxide. Where the birds are very badly affected and they respond to treatment only slowly and incompletely it is best to kill and bury them.

The canker forms are best killed whenever found, as this type seems to be very contagious and hard to permanently eradicate. Valuable birds may be treated individually by removing the mucous or pus growth and anointing the raw sore with undiluted creolin. Repeat this process twice and it will usually effect a cure.

#### FROZEN COMBS

It is well in passing to mention the possibility of frozen combs and their effect upon the health and productivity of the birds. During long spells of damp, cold weather in the late winter, the freezing of combs, especially of the male birds, is common, and results in a lowered vitality and stamina which means low fertility in hatching eggs, accompanied also by weak germs and many deaths in the shell. A dry cold is not dangerous, but a

damp, humid condition followed by a low temperature is the time when special protective measures must be adopted, such as closing the front with muslin and insuring plenty of ventilation in order to carry off the moisture exhaled by the birds at night. Frozen combs should immediately be bathed in cold water until all of the frost is out and they have attained once more their normal appearance; then they should be anointed twice daily with carbolated vaseline until the scab is entirely healed. Females rarely freeze the combs or face parts. Males with frozen combs or wattles should never be used for breeding until at least four weeks after they have attained normal health.

#### BUMBLE FOOT

"Bumble foot" is a term used to describe the formation of sores similar to corns or hard tumors on the bottom of the foot of a bird. It is characterized by an enlargement of the foot parts, and by the appearance of a hard center core when the foot is inspected from the lower side. Birds affected with bumble foot are apt to limp, and in some cases entirely lose the use of the limb affected.

Bumble foot is caused by one of two things. Heavy birds jumping from high perches onto a hard floor not sufficiently covered with litter, often bruise the foot, which causes inflammation to start. It is also caused by cuts or injuries to the bottom of the foot due to stones, slivers or other foreign material cutting or becoming lodged in the foot.

Birds affected with bumble foot can be treated by making an incision with a sharp knife in the form of an X in the bottom of the foot. The four corners of the cut can be turned back and the hard core or pus formation removed. The wound should be thoroughly disinfected with a 3 per cent. solution of carbolic acid or creolin, after which it should be wrapped up in a padded bandage for a few days, and the bird should be confined in a small, clean coop with plenty of litter on the floor. It may be necessary in some cases to treat the wound a second time in order to clear it of foreign material. It is not generally desirable to treat fowls of ordinary value, as the method is expensive and

laborious. Fowls of average value affected with severe cases of bumble foot are best killed and eaten at the home table. Birds of considerable value for breeding or show purposes can profitably be treated in this manner. Prevention here is all-important. Great care should be taken to keep plenty of litter on the floor, and, especially with the heavy breeds, to have the perches not too high above the floor.

#### CROP BOUND

Crop bound is another affliction of poultry. It is not a specific disease, but is caused by the crop becoming clogged with foreign material. Birds that consume large quantities of fibrous material are apt to become affected. Corn stover, hay and straw, if consumed by the bird, is apt to be compacted in the crop and cause the food material to be retained therein. The consumption of large quantities of green grass in the early spring may in certain cases bring on such trouble. A crop bound condition is especially common with older birds. As the bird increases in age, the muscular or peristaltic movement of the walls of the crop seems to become less and less.

Birds afflicted with this trouble should not be treated unless they are of exceptional value. If they are of considerable value an operation can be performed by making an incision in the breast directly into the bottom of the crop. This cut should be made about an inch in length and through this the congested material should be removed. The crop and adjacent tissues should be washed out with a 1 per cent. solution of carbolic acid, and the incision sewed up. The birds should be confined in a clean, restricted area and fed nothing but sloppy, moist food for a week. This operation is rather difficult, and not always successful. If the affliction is noted in its early stages the giving of a dose of castor oil may so lubricate the lining of the crop that the congested material can be forced through. It is also sometimes possible to manipulate the crop with the fingers in such a way that the large mass can be partially broken up and in this way allowed to become properly disseminated. Before an operation is resorted to these other methods should be tried.

## FOWL CHOLERA

One of the most dangerous and most highly infectious diseases of poultry is cholera. Fortunately it is not especially common. Its presence does great damage, however, since the mortality usually runs from 60 to 100 per cent. It is primarily a disease of the digestive tract, and in its mode of infection and effect upon the individual acts very much like human cholera or hog cholera. The first symptoms will usually be a number of deaths in the flock. The ailing birds will be noticed to have become listless, to lose the use of their limbs and to seek out secluded, dark corners to hide in. The combs will become dark bluish in color. The fecal discharge will become light green. Death will usually result in a very short time after these advanced symptoms are noted. If it is true fowl cholera, the infection will spread rapidly through the flock and the death rate will be enormous.

The organisms causing this disease are doubtless divided into a number of species of varying degrees of virulence, making some attacks less severe than others. The best practice when the flock becomes infected with this disease is to kill and burn all affected birds, and burn all dead birds. Thoroughly clean the inside of the poultry house, burning all movable fixtures and litter, and spraying the entire inside with a 5 per cent. solution of carbolic acid. If dead birds are not properly disposed of, and if they are allowed to lie around in the vicinity of the plant, they will be a constant source of infection to other flocks in the vicinity.

A poultryman noting signs of this disease should get in touch with some good veterinarian, or better yet, with his State Experiment Station and request their cooperation in determining the nature of the infection and their help in stamping it out.

## TUBERCULOSIS

Tuberculosis is another highly infectious disease of poultry. Its prevalence, I firmly believe, is greater than is often appreciated. Tuberculosis in fowls is very similar in its action and effect upon the individual to tuberculosis in other animals. It may affect one group of organs, or it may be generalized tuberculosis, in which case it affects many organs. One very common external symptom is a great loss of weight and emaciation, especially about the

breast bone. In its last stages the bird becomes weaker and weaker and finally loses the use of its limbs entirely. Its head becomes extended in length, and its eyes sunken and weak. The post-mortem examination will usually show nodules in one or more of the following places: lungs, liver, spleen and intestines. Flocks showing the presence of an apparent infection of tuberculosis should be killed and disposed of. The house should be thoroughly disinfected and the runs should be plowed, limed, and seeded to green cover crops. The house should be thoroughly overhauled, cleaned and disinfected. Then it may be safe to start over again with healthy birds from an entirely outside source.

A flock of Rhode Island Reds, known to the author to be seriously infected with tuberculosis, produced offspring which were weak and which lacked vitality and stamina, and contracted the disease in large numbers early in life. Tuberculosis and cholera are the two most dangerous diseases which attack the poultry flock. The poultryman should keep an eye out for any possible symptoms, and should they appear he should take immediate steps to check the disease in its early stages.

#### PROLAPSUS OF THE OVIDUCT

Prolapsus of the oviduct is a disease which may do considerable damage to poultry. As the name implies, it is the throwing out of the oviduct or egg passage. It is especially common in pullets which are laying heavily, and is most prevalent in the spring of the year, which is the natural laying season. It is due to a partial loss of the muscular control of the oviduct, the latter being weakened by heavy production. The author has found it to be especially prevalent where birds are kept closely confined in the spring and not given an abundance of succulent green food. When an attack of prolapsus is apparent the best method to follow is to compel the birds to take lots of exercise, to give them free range, if possible, and to withhold for a time the concentrated food material such as meat scrap. Prolapsus, if not checked, will result in cannibalism, which has been previously described. It is not caused by any special organism, but rather by a physiological condition due to excessive production and lack of sufficient exercise.

## VENT GLEET

Vent gleet is not very common but nevertheless is a very disagreeable affliction of poultry. The disease is highly infectious, being quickly transmitted throughout the flock. It is a disease of the cloaca or vent of the bird. The infection causes the secretion of a large amount of mucous material which is characterized by a very strong and disagreeable odor. When a flock is once attacked, it is a hard and very unpleasant task to effect a cure. The best and almost the only sure cure is to take each bird afflicted and wash out the cloaca with warm water, after which the vent and all surrounding surfaces should be thoroughly washed with a good disinfecting solution. Mercury preparation is the best. This washing and disinfecting must be repeated a number of times before even a partial cure can be effected. Persistent cases will often require treatment every other day for a period of two weeks or even longer.

When this disease is noted in a flock, immediately isolate and inspect the individuals of the flock to determine the extent of development. The peculiar odor is the best symptom. Advanced cases show yellow masses of this hardened mucous secretion attached about the vent. The disease is persistent and disagreeable to handle, but should be dealt with immediately upon discovery. Vent gleet is often brought into an otherwise healthy flock through importation of male birds or through the purchase of females, usually the former way.

An effort has been made in the preceding pages to discuss simply the common afflictions of poultry and to give a simple method of procedure in each case. There are a great many other diseases of the domestic fowl but limited space does not allow of a general discussion of them. The poultryman is referred to the following table compiled by Raymond Pearl of the Maine Agricultural Experiment Station for general symptoms and disease determination. By using this table in connection with a standard text on poultry diseases he will be better prepared to make a home diagnosis and check the trouble in its early stages.

A PRACTICAL DIAGNOSIS TABLE \*

SYMPTOM	DISEASES WHICH THE SYMPTOM MAY INDICATE
Abdomen swollen .....	Peritonitis, dropsy, white diarrhea.
Belching of gas.....	Inflammation of crop.
Breathing abnormal, i. e., too rapid, too slow, wheezing, whistling, snoring or different from normal .....	Arsenic poisoning, pericarditis, gapes, air-sac-mite, diseases of the respiratory organs.
Choking .....	Arsenic poisoning.
Comb, pale .....	Tuberculosis, dropsy, air-sac-mite, infectious leukaemia, white diarrhea.
Comb, first pale but later dark....	Enteritis.
Comb, very dark.....	Liver disease, black head, congestion of the lungs, pneumonia.
Comb, yellow .....	Liver diseases, visceral gout.
Comb, with white powdery scurf..	White comb.
Constipation .....	Simple constipation, indigestion, inflammation of the oviduct.
Convulsions .....	Arsenic poisoning, copper, lead or zinc poisoning, epilepsy, harvest bug.
Cough .....	Diseases of the respiratory system.
Crop, enlarged and hard.....	Crop bound.
Crop, enlarged and soft.....	Inflammation of crop, enlarged crop, gastritis.
Diarrhea .....	Diseases of the alimentary tract, arsenic poisoning, copper, lead or zinc poisoning, black head, tuberculosis, cholera, roup, white diarrhea.
Nostrils, discharge from.....	Diseases of the respiratory organs.
Emaciation .....	Tuberculosis, aspergillosis, visceral gout, mites, white diarrhea.
Eye, expansion of pupil.....	Arsenic poisoning.
Eye, sticky discharge from.....	Catarrh, roup.
Face, swollen .....	Roup.
Droppings, bright emerald green.	Cholera.
Fever, marked .....	Peritonitis, aspergillosis, infectious leukaemia, inflammation of oviduct.
Lameness .....	Tuberculosis, aspergillosis, rheumatism, scaly leg, bumble foot.
Legs, roughened with scales raised.	Scaly leg.
Mouth, mucous discharge from...	Congestion of the lungs, pneumonia, gapes.
Mouth, white cheesy patches in..	Roup, canker.
Nausea and vomiting.....	Inflammation of the crop, copper, lead or zinc poisoning.
Neck, bent forward.....	Strychnine poisoning, congestion of the brain, wry neck.
Neck, limp .....	Limber neck.
Paralysis .....	Copper, lead or zinc poisoning, strychnine poisoning, apoplexy, heat prostration.
Saliva, copious secretion.....	Arsenic poisoning.
Skin puffed out in blisters.....	Emphysema.

\* Taken from Bulletin on Poultry Diseases by Maine Agricultural Experiment Station. Used by permission of Dr. Raymond Pearl.

A PRACTICAL DIAGNOSIS TABLE — *Continued*

SYMPTOM	DISEASES WHICH THE SYMPTOM MAY INDICATE
Skin, scaly and incrustated.....	Body mange, favus.
Staggering .....	Congestion of the brain, leg weakness.
Thirst, excessive .....	Hypertrophy of the liver, peritonitis, aspergillosis, tapeworm.
Tongue, dry and hard.....	Pip, diseases of the respiratory system.
Tumors on head.....	Roup, chicken pox.
Urates, yellow .....	Cholera.
Vent, mass of inflamed tissue projecting from .....	Prolapsus of the oviduct.
Vent, skin inflamed.....	Vent gleet.

## SANITATION AND DISEASE PREVENTION

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In the successful management of poultry, there is no more important factor than the maintenance of health. Owing to the possible ravages from common diseases and the inconvenience which they occasion, not only in dead birds but in decreased production, it is essential that the poultryman keep a sharp lookout for such



FIG. 127. A VIGOROUS MALE.

Note in this bird the erect carriage, the rather high tail and the great depth of body. Also observe the short, thick set head, short, stout beak and bright prominent eye. These are characteristics which should be searched for in the birds which are to be used for breeding.

occurrences. He must make conditions surrounding the birds of such a nature that they will be unfavorable to the appearance and development of disease. His efforts should be toward preventing rather than curing. There are certain types of diseases mild in nature which affect the whole flock, and may be desirable to treat



FIG. 128. A WEAK LOW VITALITY MALE.

Note the low drooping carriage and low hanging tail. Observe the shallow rather long body. The long, narrow head and depressed, sunken eye are common signs of loss or lack of vigor. The long, slender, needle like spur is an unfailing sign of low vitality. The vigorous male has a short, hard, horny spur. Such males as here shown should never be used for breeding. The sooner they can be detected and weeded out of the flock the better for all concerned.

with an effort to cure; but with the majority of poultry diseases the value of the individual bird is so small and the amount of labor required to treat it properly with the expectation of attaining the cure is so great that it is usually not advisable nor profitable to treat individual birds which have any infectious disease, unless they are of high intrinsic value.

## VALUE OF INHERITED VIGOR

The first asset toward the maintenance of health is that the birds comprising the flock should themselves be strong and healthy, and should have been hatched from strong, healthy parents. Birds which have always been healthy possess high vitality and a factor of disease-resistance which is very valuable in the maintenance of health. A few diseases are inherited, the most noticeable being white diarrhea. Most of them, however, are contracted after hatching, and the prevalence and mode of transmission are largely a matter of environment.

## METHODS OF INSURING VIGOR IN THE FLOCK

Since vigor and vitality are so essential in maintaining health, the following brief discussion points toward some essential conditions to maintain this vigor.

1. Strong, healthy, well mated breeding stock.
2. Only laying hens which have attained full maturity should be used for breeding.
3. The breeding stock, during the time the eggs are saved for hatching, should be given plenty of exercise, should be kept out in the fresh air, should be maintained in perfect health and should not be forced for an excessive production.
4. From the time the eggs are laid until the chicks are hatched the eggs should be subjected to an environment, both before and during incubation, which will result in a large, strong, robust chick. Plenty of moisture in incubation is one of the essentials to bring this about.
5. During the brooding and growing season all methods of management should strive towards one thing; namely, a uniform, continuous growth from hatching time to maturity.
6. At maturity the birds should be placed in dry, well ventilated houses, which are clean and can easily be maintained in a sanitary condition.

## PRACTICAL METHODS OF PREVENTING DISEASE

Next in importance to the necessity of strong, vigorous birds comes the question of maintaining proper environmental conditions and proper methods of management.

*Keep birds clean and free from diseases.* In order to maintain health in the flock, it is essential to stamp out any disease in the beginning before it becomes established. This should be done in the following way: the poultryman must keep a watchful eye on his flock to determine in the beginning any abnormal condition, either by loss of appetite, digestive disorders, eye or throat troubles, or any other abnormal suspicious condition. When such conditions are noted, the trouble should be immediately diagnosed, and the possible cause determined. If the whole flock seems to be afflicted, the detection and elimination of the cause and flock treatment will usually suffice to check the spread. If only a few individuals seem to be affected and the disease is of an infectious nature, the immediate removal of all birds attacked is very essential. This will prevent the spread of the infection and will make possible a thorough and complete disinfecting of the quarters.

In such cases, it is usually best to kill and properly dispose of the infected birds. The best means of disposing of same is to bury them three or four feet below the ground or to burn them. It is very dangerous to throw them in the bushes at some little distance from the plant, as they will often be dragged around by animals, or — worse yet — the healthy birds on the plant may get to them in ranging and thus the infection be rapidly spread. Epidemics of cholera, tuberculosis, etc., are often caused by carelessness in not making the proper disposal of dead birds.

*Keep the birds free from body parasites.* Of the many external parasites of poultry, two types are quite prevalent and are apt to sap the vitality of the flocks and thus make them more susceptible to infections. These are body lice and the red mite. Their prevalence in large numbers results in loss of appetite, loss of weight, practical cessation of production, and a general unprofitableness.

Prevention is much easier than eradication, and consists, in the case of body lice, of providing suitable dusting quarters in the pen. The best arrangement for this is six or eight inches of fine sand or road dust in a corner of the pen. If it has a concrete floor, this dust should be kept free from litter or straw. A normal flock will usually keep themselves free from body lice; but, if they multiply to serious proportions, dusting with a good lice powder twice a year

will usually be sufficient to eradicate them. The following mixture, known as "Lawry's Lice Powder," is recommended by the poultry department of Cornell University.

"Take three parts of gasoline, and one part of crude carbolic acid 90 to 95 per cent. strength. Mix these together and gradually stir in enough plaster of paris to absorb all the mixture, which will usually be about four quarts of plaster of paris to one quart of liquid. Thorough mixing of the liquid will result in a dry, pinkish brown powder with a fairly strong carbolic odor."

With the red mite, which is a blood-sucking insect, an entirely different procedure must be followed, for these insects lodge in the cracks and crevices around the perches, flocking to the birds at night when they are at roost, while the body lice live on them all the time. Owing to the fact that the mite can be attacked in the daytime in the poultry house, they are somewhat easier to combat. The best method is to spray the perches thoroughly with a solution composed of 50 per cent crude carbolic and 50 per cent of kerosene, saturating all the woodwork and getting into all the cracks and crevices. The frequent removal of the droppings and the keeping of clean litter will also aid in extermination.

*Keep the poultry house clean.* Clean houses and coops are essential, since the birds are rather closely confined to the house during the greater part of the year. It is essential that these be so constructed and managed that they will provide congenial environmental conditions, and be easy of disinfection. The poultry house should be so designed as to provide an abundance of fresh air and plenty of sunlight, and should be absolutely dry. These factors will materially aid the poultryman in suppressing the spread of disease and maintaining a high degree of vigor in his birds. Proper management must go together with properly constructed houses.

There are three things which require special attention in the management of poultry from a sanitary and hygienic standpoint. First, there is the proper care of the droppings, the best rule being that they should be removed from the dropping boards at rather frequent intervals — usually twice a week. The dropping board should be kept sprinkled with an absorbent or deodorant, such as gypsum or land plaster — better still, acid phosphate. In the

winter, when there are long spells of damp weather and the droppings can not dry quickly, they give off objectionable odors and it is probably better to clean them every day. Next is the care of the litter; it should be kept coarse, dry, clean and deep, the function of the litter being to hide the grain and keep the birds working for it. When the litter becomes fine and packed hard, it loses this function and hence should be frequently removed. A good plan is to start in the fall with two or three inches of straw or any good coarse, dry litter, and add to it from time to time, so that about eight inches of litter will be maintained throughout the winter. It may be desirable at frequent times to fork back the coarse straw and clean out the fine material which is sure to accumulate.

In addition to these two operations, it is necessary to make a general cleaning, at least twice a year, spring and fall, going thoroughly through each pen, cleaning out the houses, sweeping them, putting the fixtures out in the sun to air, and then spraying the interiors of the houses thoroughly with the following disinfectant solution: five quarts of cream of lime, one pint of zenoleum, and one quart of kerosene.

This mixture should be well shaken and diluted with an equal amount of water, then applied with a force pump through a fine nozzle. Used in this way, the solution will accomplish three things more rapidly and easily than if applied with a brush.

1. A thin coat of whitewash will be evenly applied and spread with force enough to put it into all the cracks and crevices.

2. The zenoleum will kill any disease germs which may be lurking in the house.

3. The kerosene will destroy or drive out all red mites, and, to some extent, body lice. The former are easily exterminated by this spray, and the latter by means of a good lice powder in connection with the spray.

The above solution for common use is cheap, easily applied and a perfect disinfectant. It will make the house clean, which means more attractive surroundings and more healthy birds.

The fixtures should then be replaced, the floor covered with fresh, clean litter, and new nesting material put in the nest.

## CLEAN YARDS AND RUNS MEAN CLEAN BIRDS

The soil selected for the poultry plant should be of a sandy, porous nature, easily and quickly drained and thus dry and warm. The poultry houses should be built on a slope so as to obtain good water and air drainage, and they should be faced south so they will warm up quickly and get the best possible distribution of sunlight. When planning the plant, the importance of laying out the yards must be appreciated. The large yard is the best from a sanitary standpoint. Such large areas are usually covered with grass. In roaming over such a large area, the birds cannot seriously contaminate any part except in the vicinity of the house, which can be plowed frequently to correct this condition. If the houses are small and portable, they can be moved frequently to correct same.

If it is necessary to keep the birds closely confined in small yards, owing to possible injury to crops, or other causes, it should be the practice to provide double yards, each pen or flock having connection with the two yards; then, by practicing alternation of yards and rotation of crops, sanitary conditions of the poultry flock can be maintained. In laying out double yards, there are a number of plans to follow, possibly the most common of which is to have front and back yards. Another plan is to have a very large front yard, divided into small yards by a centrally located fence. Another practice which is especially applicable to long laying houses, is to have a small exercise yard in front of each pen. In front of these there should be much larger feeding yards, so placed that two exercise yards communicate to one feeding yard. Whatever type of double yard is practiced, a simple form of crop rotation should be worked out which will admit of planting and feeding from three to five crops in the yards during the season. A good rotation for New York State is as follows:

In the early spring sow Canada peas and oats in one yard, while the birds are feeding on winter wheat and rye which was sowed the fall before in the other yard. Follow the winter wheat with buckwheat, and the peas and oats with soy beans, and it will be possible by changing the birds back and forth from one yard to another to provide continuous supplies of green forage. At the same time the frequent harrowing, etc., maintains the yards in a clean condition and utilizes the filth and droppings to grow the crop.

*None but clean, wholesome foods should be used.* Since the birds are required to consume an immense amount of food for producing a large weight of production in proportion to their size and weight, it is essential that nothing but dry, wholesome, clean food materials be fed. Cheapness in reference to poultry feeds often falls far short of economy. Moist, mouldy corn and shrunk wheat and such cheap foods should be discarded in favor of a good wholesome grain, which costs considerably more. A clean feeding practice should also be maintained when wet mashers are fed. It should be the practice to avoid leaving portions of the mash in the trough to become sour. Sour feeds will upset the digestive system of poultry more quickly than any other one thing. The litter in which the grain is fed should be kept clean, and a constant effort be made to provide the birds with the most wholesome food possible in the cleanest possible manner.

#### SUMMARY

In conclusion it might be said that the health of a flock of poultry is due: first, to having naturally strong birds, endowed with plenty of inherited vitality; second, to a congenial, sanitary environment, which is made so by having dry, clean houses and clean yards; third, by keeping the birds free from parasites and watching carefully for any signs of trouble; fourth, by stamping out any possible infection when it first makes its appearance.

A clear appreciation of the nature of the common diseases and their causes will mean healthier, stronger birds and a better production, which will result in more profit from all of our poultry flocks.

## MARKET EGG PROBLEMS

EARL W. BENJAMIN

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The problem of marketing eggs is the same as that of any other food product. From the producers' standpoint it is the problem of giving himself better times, and such a thing cannot permanently be accomplished without improving conditions for both the producer and the consumer. The question of selling the product is one of being able to create a demand, and this can be done only by producing a better product and then

treating the consumers in a satisfactory manner.

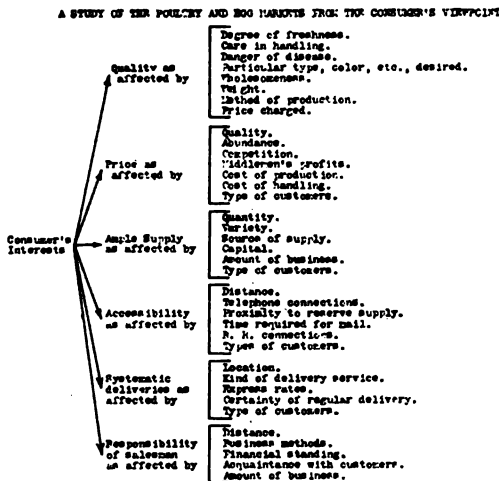


FIG. 129. NOTE THE INTRICATE SYSTEM OF FACTORS UPON WHICH THE SATISFACTION OF THE CONSUMER DEPENDS. ALL FACTORS MAY NOT HAVE A DIRECT INFLUENCE, BUT THEY SHOULD NEVERTHELESS BE CONSIDERED BY THE MARKET MAN.

The market egg problem, then, is a problem both of production and of selling. Glance at the consumers' interests noted in Fig.

129. This table shows the intricate factors which go to make a satisfied consumer. The present day methods of marketing with all their expense, extravagance, duplication of work and inefficiency must be followed to a great extent by the average producer. These methods of selling and buying have been gradually perfected during the past centuries and probably no radical improvements can be made at this time.

#### PRODUCTION OF GOOD MARKET EGGS

The first part of the problem that the farmer must meet is the producing of a good market egg to sell when he gets a chance. The consumers are becoming more particular as to how their food products are handled. Competition is so keen that the farmer who has products just a little better than his neighbors will get the best markets. It is not alone a matter of pride in being able to produce the best goods, but it is now a matter of dollars and cents in being able to produce the goods which satisfy the demands of the best markets. The farmer who can combine this faculty with that of economical management has a great advantage over most of his fellow producers.

TABLE I—COMPARISON OF WEIGHTS OF EGGS INCUBATED AND WEIGHTS OF CHICKS HATCHED

Types of eggs incubated	Eggs incubated		Day-old offspring		1-year-old offspring		2-year-old offspring	
	Average weight (grams)	Percentage	Average weight (grams)	Percentage	Average weight (lbs.)	Percentage	Average weight (lbs.)	Percentage
51 or less (grams)...	48	100	28	100	3.2	100	3.7	100
51 to 57 (grams)...	55	115	33	118	3.3	103	3.8	103
Over 57 (grams)...	61	127	38	136	3.6	113	4.2	114

Note the remarkable similarity between the percentage columns of the eggs incubated. Day-old offspring, one-year-old offspring and two-year-old offspring. The effect of the size incubated continues at least through two years of the bird's life.

#### SELECT THE BREEDING STOCK

If the farmer is to produce a good market egg his attention must be given to several factors, one of the first of which to meet his

consideration should be the selection of the breeding stock. Pure-bred stock is usually desirable because of the greater uniformity of the product. It is well to have all the eggs as nearly alike as possible; they then approach the desirable condition of being standardized.

The breeding stock should have been bred for many years for the production of good market eggs. This parentage behind the stock will have a strong effect upon the offspring. The breeders should be healthy, good-sized, vigorous and normal. Any birds showing a tendency to produce double yolk eggs, weak shells, blood clots or other similar types of abnormal egg contents, or abnor-

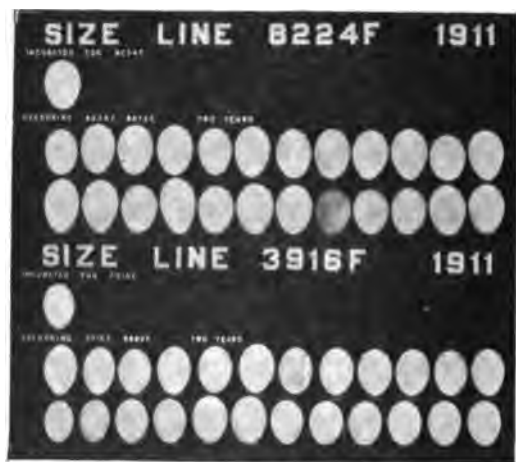


FIG. 130. THE UPPER HALF OF THIS FIGURE SHOWS TWO GENERATIONS SELECTED FOR LARGE SIZE. THE LOWER HALF SHOWS TWO CORRESPONDING GENERATIONS SELECTED FOR SMALL SIZE.

mally shaped eggs, should be identified and culled from the flock. These characters are probably inherited, at least to some extent. The farmer should use only those breeders which are examples of what he wants his pullets to be the next year.

#### SELECT THE HATCHING EGGS

After selecting the breeding stock, still further protect yourself by very carefully culling the eggs for hatching. The writer has found that the size of the egg incubated has a direct effect upon

both the size and vigor of the chick hatched from it. Table I shows the relative size of the eggs incubated and the chicks hatched from them in 1911. The 1912 results corroborate those of 1911 in every way. The relative weights of the eggs and chicks are figured out for the one-day, one-year and two-year ages. It is surprising how uniformly the influence of egg size holds effective throughout the lifetime of the chick. Since it is very probable that we must have a good-sized body in order to have good-sized eggs, it seems apparent that the selection of the eggs used for hatching will have effective and desirable results.

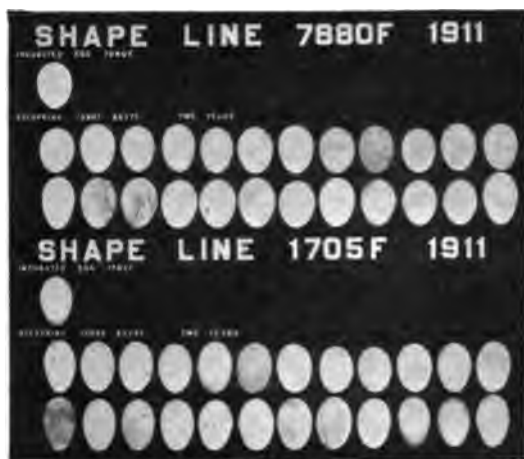


FIG. 131. THE UPPER HALF OF THIS FIGURE SHOWS TWO GENERATIONS SELECTED FOR ROUND SHAPE. THE LOWER HALF SHOWS TWO CORRESPONDING GENERATIONS SELECTED FOR LONG SHAPE.

The effect of selecting large or small eggs for hatching is shown in Fig. 130. The single egg at the upper left hand side of the figure was selected from Hen 8224F because it is a large egg. The single egg below was selected from Hen 3916F because it was very small. Below each one of these two single eggs there are arranged twenty-four eggs, twelve of which represent the first year's production and twelve of which represent the second year's production of the pullet hatched from the respective egg shown above them. These twenty-four eggs are, in each case, typical and representative examples of the two years' production of each

of the two offsprings, one year represented by each row of twelve eggs. The eggs are not selected haphazard, but in regular numerical order, according to the total annual production of the respective bird. Fig. 130 shows the remarkably large size of the eggs laid by Pullet 8872F from line 8224F originally selected for large size, and the small size of the eggs laid by Pullet 8882F from line 3916F originally selected for small size. This figure is made up of shadow photographs and represents the actual eggs laid. These results are indicative of the results obtained with practically all the birds used for two different years. The size of eggs seems to be distinctly inherited.

The shape of the eggs is found to be nearly as distinctly inherited as the size. Fig. 131 shows the results of two of these lines of inheritance. The arrangement is the same as explained for Fig. 130, so further explanation will not be made here. The upper part of the figure represents line 7880F, which was selected for round shape, while the lower part represents line 1705F, selected for long shape. The respective characters of these lines have been retained as in the case of size, and the shape of eggs seem to be almost as strongly inherited as the size. This is important as regards the production of a normally shaped egg which will pack well in the regular market packages and which will look well on the market.

By a further study it was found that the color of the shells of the eggs is also inherited, to a somewhat less degree than the shape. The inheritance is sufficient, however, to aid considerably in the production of a fancy white egg for one market or perhaps a certain tint of brown for some other market.

The selection of the eggs for hatching should be carried on rigidly by incubating only those eggs which are of the type one wishes his pullets to produce the next year.

If the reader wishes to have access to the original data upon which these and various similar conclusions are based, he may refer to the 1914 Ph. D. Thesis of Earl W. Benjamin, "A Study of the Variation and Inheritance of the Size, Shape and Color of Eggs," unpublished, but deposited in the library of Cornell University.

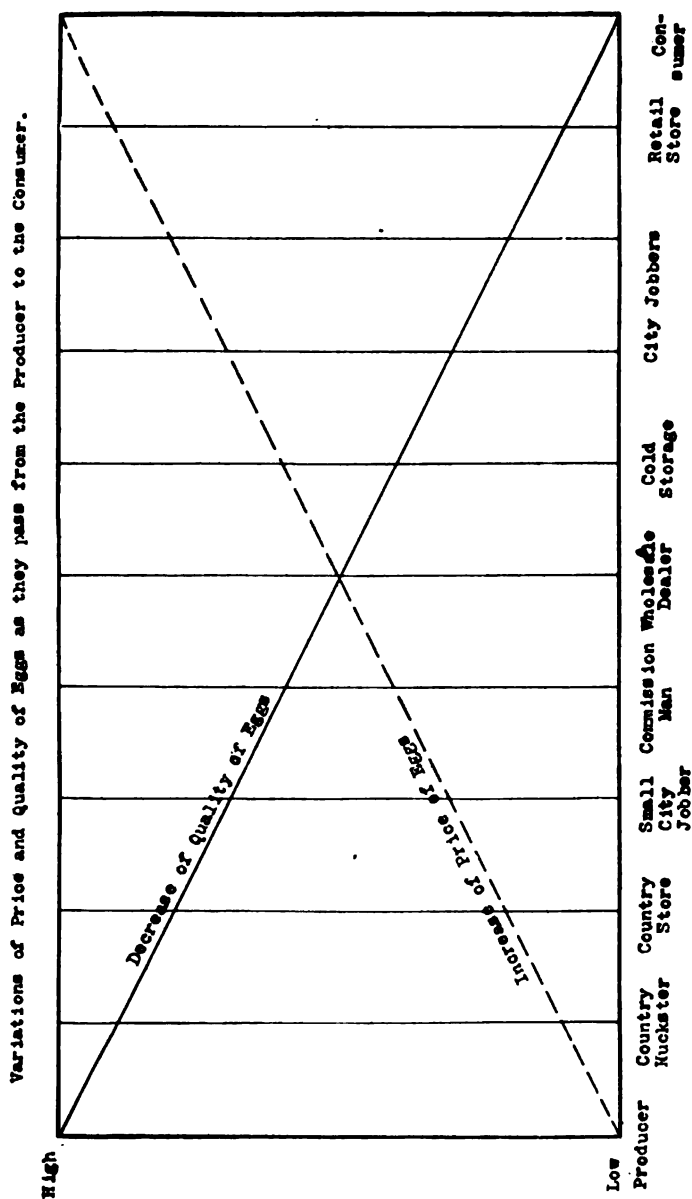


FIG. 132. THE MORE TIMES THE EGGS ARE HANDLED THE POORER QUALITY THEY BECOME AND THE MORE COSTLY THEY MUST BE. SIMPLE METHODS OF MARKETING ARE DESIRABLE.

## SEPARATE MALES AFTER THE BREEDING SEASON

The greatest proportion of all losses incurred while marketing eggs may be traced to the presence of the male bird in the flock. Every poultryman in New York State should write to the New York State College of Agriculture at Cornell University, Ithaca, N. Y., for the Reading Course Lesson entitled "The Interior Quality of Market Eggs." The charts in this lesson show the relative effects of ordinary handling on the quality of fertile vs. infertile eggs. As soon as an egg is fertilized it is practically condemned as a poor quality egg, unless the utmost care and expensive equipment is used in handling it. Every producer of eggs should take pride enough in the quality of his products to dispose of the male bird as soon as the breeding season is over. Cockerels are as good as old cocks for the next year. Eat the bird and save the feed as a matter of economy. The females will lay as well, if not better, with the male bird away. If the male birds are too valuable to dispose of they may be penned together in a cheap shelter; at any rate, remove the males from the laying hens.

## CULL THE GROWING STOCK

Cull the growing stock carefully and retain only those birds that are relatively strong and vigorous throughout their period of development.

## HOUSE THE LAYING STOCK PROPERLY

Provide a clean house which is well ventilated and consequently cooler in summer and warmer in winter. The surrounding grounds should be clean and well drained. If the hens come into the house with muddy feet or get them soiled on the filthy floor, they will soil the nests and eggs, and every egg will have to be cleaned. Dirty eggs and washed eggs are also often infected by bacteria and rapidly deteriorate.

## PROVIDE PLENTY OF CLEAN NESTS

Usually one nest to each six hens is desirable. These should be arranged so that the hens will distribute the eggs over the entire lot. If many eggs are laid in one nest the repeated heating of the first laid will seriously affect additional ones, especially if they are fertile. Nest eggs should be used if necessary in order to

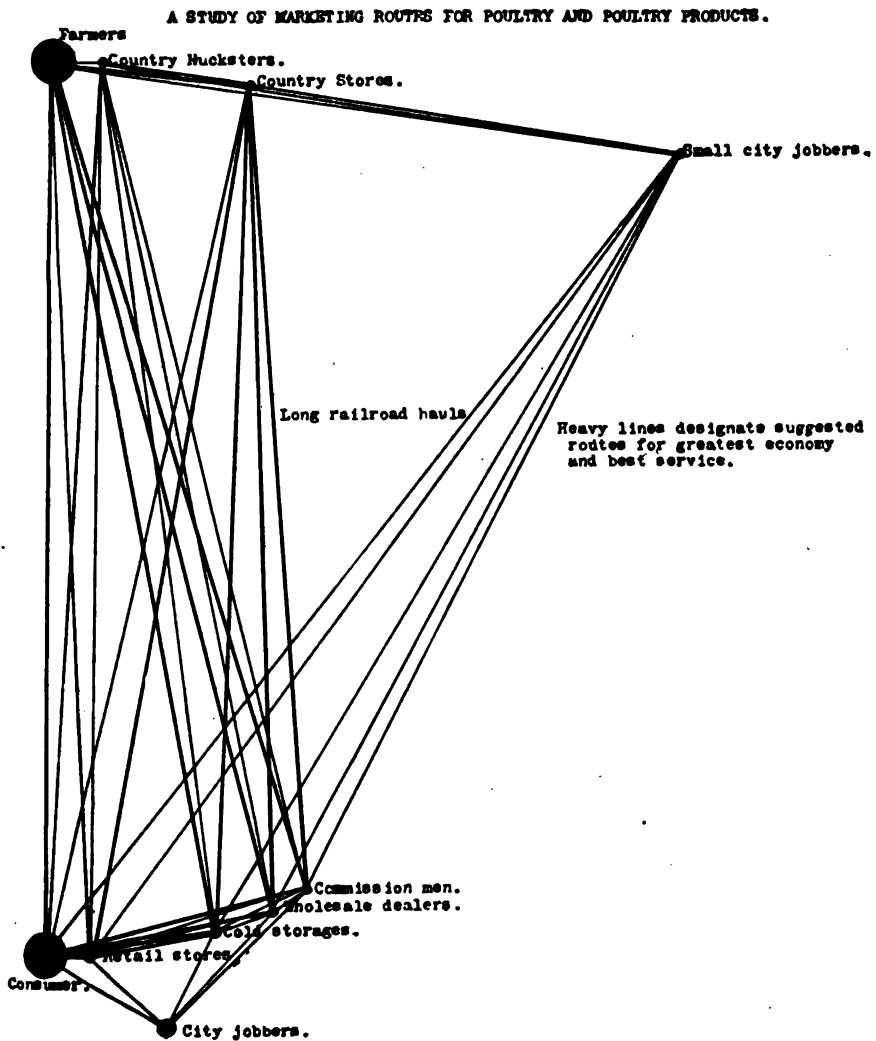


FIG. 133. GENERAL DISTANCES FOR SHIPPING ARE DENOTED BY THE RELATIVE DISTANCES BETWEEN POINTS ON THE CHART.

insure an even distribution of the eggs. Keep the nests filled with fresh, clean straw; do not allow any filth to collect.

#### FEED PROPERLY

The birds must have a well balanced ration in order to produce normal eggs. Foods have only a very slight effect, if any, on the chemical analysis of the egg. White corn, wheat and buckwheat will produce pale-colored yolks, while yellow corn and green food will produce dark-colored yolks. The feed is not known to affect the color of the shell.

A few feeds, such as onions, celery and cabbage, as well as bugs, worms, etc., will often transmit an undesirable odor or flavor to the eggs. Rape has been reported many times as giving a very dark color to the yolk and an offensive odor to the egg if given in unlimited quantities to the birds in the early spring.

Some form of lime, such as oyster shell, is essential for the production of strong egg shells.

#### GATHER THE EGGS REGULARLY

The eggs should be gathered at least once a day, and twice a day during the very cold or very hot weather is desirable, in order to prevent chilling or heating. The final quality of the egg on the market depends largely on the little things that happen on the farm. It is very true in this connection that "an ounce of prevention is worth a pound of cure."

#### CLEAN ALL DIRTY EGGS AT ONCE

All soiled eggs should be separated at once from the clean ones, and carefully cleaned. This cleaning should be done with the least possible amount of water. A moistened cloth rubbed on a cake of "Bon Ami" or some other similarly abrasive soap is very satisfactory. No acids should be used, as they act the same as large amounts of water and tend to dissolve the gelatinous coating of the egg, which helps to protect it from infection. Eggs which have been soaked in water are of a very inferior quality.

If eggs are to be placed in cold storage or preservative, they should not be washed. All washed eggs should be used as soon as possible.



FIG. 134. EVERY CLASS OF CUSTOMERS CAN BE SUPPLIED BY THE MORE GENERAL METHOD OF MARKETING ILLUSTRATED AT THE LEFT. ONLY THOSE WHO CAN AFFORD TO GO TO SOME EXTRA TROUBLE CAN BE SUPPLIED BY THE DIRECT METHOD ILLUSTRATED AT THE RIGHT.

## DISPOSE OF CHECKED AND BROKEN EGGS QUICKLY

As soon as an egg is checked or broken the bacteria can find easy entrance and deterioration begins. These eggs should be used at home or sold to local trade such as private families, hotels or bakeries.

## KEEP THE EGGS IN A COOL AND RATHER MOIST PLACE

The evaporation and heating of eggs are probably the causes for most of the deterioration of market eggs. All eggs will evaporate, whether fertile or not. Fertile eggs are much more



FIG. 135. PACKAGES OF THIS SORT GIVE VERY GOOD SATISFACTION FOR SHIPPING VALUABLE EGGS. THEIR HANDLES AND APPARENT FRAILNESS SEEMS TO INSURE CAREFUL HANDLING BY THE EXPRESSMEN.

seriously affected by heating than infertiles. A temperature as low as 72°F. will start the development of the embryo to such an extent that when it dies decomposition may set in. The eggs should be held in some location similar to a well-ventilated cellar. The air should be as cool as possible during the summer and just dry enough to prevent molding.

The room where the eggs are held should be clean and free from all odors such as the odor of fruits, decomposing vegetables, oils, etc.

## SELLING MARKET EGGS

After the eggs are produced and held ready for shipment, a good part of the market problem has been solved. If the goods are produced, the farmer, or salesman, as he now becomes, has at least something worth while to sell. This, I believe, is one of the most important requisites for success in selling.

## MARKET ROUTE MUST BE SELECTED

Before anything at all is done with the eggs the farmer must determine how he wishes to sell them. In deciding this question he should keep in mind the general principle of food distribution illustrated in Figure 133. As we shall see later this does not mean that every one should sell his eggs direct to the consumers; it simply shows that there are naturally certain mutual benefits as regards price and equality, if this is done.

The farmer may select his marketing method or route from the many shown in Figure 134. He may ship direct at a little more trouble and annoyance, or he may employ any combination of the various marketing agencies which have been gradually developed during the past years. Among these agencies the country stores, commission men, cold storage houses and retail stores are the most satisfactory. The country huckster really duplicates the work of the country storekeeper or his representatives, and does the work less efficiently. The small city jobbers are really useless because the country storekeepers should have enough eggs to ship directly to the commission men. The wholesale dealers are of course about the same as commission men. Those who receive eggs directly from farmers should be bonded and required to operate under the law the same as regular commission men. The city jobbers are useless parasites on the markets. They are especially noticeable on the New York City market where they bargain and dicker continuously, squeezing their wages out of the eggs which are already bearing more handling and added profits than they should. These city jobbers have wedged themselves in between the producer and consumer, forcing them farther apart, and thereby increasing the variations in price and quality as shown in Figure 132.

After pondering on these general considerations the farmer might consider two methods of marketing in detail. Figure 134. To the right is the direct method with the various factors concerned: the advantages are listed above and the disadvantages below. In comparison with this direct method consider the more indirect method noted to the left and called a "competitive system of centralized distribution." This term means that the desirable feature of competition is retained and yet the business is large, well organized and centralized so that all the efficiency



FIG. 136. VARIOUS TYPES OF CARTONS MAY BE USED FOR RETAIL TRADE. THIS MEANS ADDED EXPENSE AND TROUBLE.

benefits of good business are obtained. In this new system the poultrymen ship direct to the city distributors; the small farmers sell to a country dealer, who in turn ships direct. These city distributors then can classify their business and cater satisfactorily to each of the five classes of city consumers noted.

The average farmer does not have time to develop a private trade and sell his products direct. He must depend upon some established agency and this agency will probably be the country store or the commission man, possibly the city retailer. A few farmers are natural salesmen, and it will pay them to develop a more intricate market scheme.

Many farmers are placing their eggs in preservative or cold storage during the spring months and putting them upon the market as preserved or cold storage eggs during the following winter. This will undoubtedly be done more during the future, but it usually requires a man who can give a little more than ordinary attention to his market methods.



FIG. 137. THIRTY-DOZEN CASES ARE DESIRABLE FOR EGG SHIPMENTS. SOME STYLES OF CARTONS MAY READILY BE PACKED IN THESE CASES. THIS IS A NEW RETURNABLE CASE. SECOND-HAND, NON-RETURNABLE CASES ARE CHEAPER AND ABOUT AS SATISFACTORY.

#### PACK THE EGGS CAREFULLY

Many types of egg packages have been devised. A market basket proves to be very desirable for shipments of hatching eggs, as the handle and apparent frailness insure careful handling, Fig. 135. Market eggs may be packed in ordinary thirty-dozen crates with regular fillers, or they may be placed in various types of cartons, according to the demands of the trade. Egg cartons cost about one cent each. Parcel post packages are being developed rapidly and many desirable types will soon be on the market. If shipment is to be made in thirty-dozen crates, second-hand crates can be obtained much more cheaply and are just about as serviceable. Be sure that all fillers are good; one broken egg may smear a great many.

## HAVE REGULAR CUSTOMERS



FIG. 138. LARGE LOADS OF EGGS ARE MORE ECONOMICAL TO HAUL. IF SEVERAL NEIGHBORS IN THE COMMUNITY ARRANGE FOR ONE MAN TO MARKET THEIR EGGS REGULARLY MUCH TIME AND EXPENSE CAN BE SAVED.

It is usually better to become acquainted with a few good dealers or customers and build up a reputation with these, than to send to many different and unknown parties. Most dealers will recognize the superior quality of your eggs, if it is there, and will be

willing to pay you for it. Private customers, hotels, retail stores, cooperative organizations of consumers, etc., will of course be willing to pay a premium for fancy quality eggs upon which they can depend.

## SELL REGULARLY

• Sell the eggs at least each week, and oftener if possible. Avoid making special trips to town with them; rather combine with the neighbors as is done for hauling milk.



FIG. 139. THE EXPENSIVE DELIVERY EQUIPMENT MAINTAINED BY SINGLE DISTRIBUTORS MUST ADD TO COST OF THE PRODUCT. STEPS SHOULD BE TAKEN TO ELIMINATE ALL UNNECESSARY HAULING.

## CONTINUALLY PLAN TO IMPROVE YOUR MARKET

Your present method of marketing may not be the only method and perhaps not the best one. Your system of marketing may determine your profits. Visit your market occasionally and become acquainted with conditions and the marketmen. It will mean dollars and cents to you as well as a better understanding of your business. Even if you do not care to do this for your



FIG. 140. EVERY EGG MUST BE CANDLED BEFORE IT REACHES THE CONSUMER. THIS HOUSE KEEPS SEVEN MEN THE YEAR AROUND FOR CANDLING.

own benefit, you owe it to the community. The people have a right to, and they soon will, demand that the producers prepare a good food product and that this product be handled according to the best principles as formulated from all scientific knowledge upon the subject.



## DUCKS

FRANCES E. WHEELER, CHAZY, N. Y.



The duck industry is today an important one in our country and speaks for itself as to market values and profits. If duck raising did not pay, farmers who have raised ducks exclusively for forty or fifty years would long ago have gone out of the business, instead of which the industry is constantly growing.

The weak spot in undertaking many enterprises is that "they look so easy."

Of course such a point of view is bound to bring us trouble, worry and disappointment. Nothing that is really worth while is easy. Success along any line on the road to final achievement involves endless patience, plodding, persistent



FIG. 142. CRESTED WHITE DUCKS, OWNED BY  
R. E. OWEN, FULTON, N. Y.

study, and care of detail. This has proved especially true on duck farms of established excellence and reputation. Each one stands as a monument to the man whose faith, intelligence and energy has evolved it.

## THE PIONEERS OF THE BUSINESS

Mr. James Rankin is undoubtedly the father of our duck business. He discovered the possibilities that existed in the duck, and with his worn-out farm of forty acres in Bozonsville, near Albany; his crude and imperfect incubator and small flock of ducks, developed his theories into a success that revolutionized the duck industry.

Previous to Mr. Rankin's experiment, ducks were just a nuisance. They ate a lot, swam a lot, cost a lot, and in the fall were killed and marketed or eaten at home. When he began to



FIG. 143. FIRST PRIZE CRESTED WHITE YOUNG DRAKE, SYRACUSE, 1914. BRED BY R. E. OWEN, FULTON, N. Y.

them under artificial conditions he quickly discovered that both old and young ones responded to a change of environment and to a change of diet with an astonishing promptness not known to any other fowl; that breeders, if given a certain food, would begin to lay whenever wanted; that under favorable conditions the duck could be made to grow at nine weeks of age, at five to seven pounds each. Best of all, he could sell all he could raise at 75 cents a pound.

Following closely Mr. Rankin's success, other duck plants were established and competition speedily lowered prices. Today ducks can be bought for 30 cents and later ones for 16 cents per pound. That there is still profit in ducks is because of the applied knowledge, thrift and experience of our duck managers.

Success is due also to nonadvertisement of methods. Knowing that the industry can readily be overdone and the market



FIG. 144. FLOCK OF PEKIN DUCKS

glutted — for ducks as an article of food have not a steady mand of sale as have chickens — each duck farm has had to its own pioneer to a certain extent.

This, though hard on amateurs, is fair, for to know how to handle ducks profitably is like finding a gold nugget. We do not usually tell the other fellow of its whereabouts until we have exhausted its possibilities or are satisfied with what we have. Besides, each of us must always be, in a sense, his own pioneer. No two people go to work in the same way. Jefferies said, "Always take hold of the smooth end of the handle," and I notice that usually we take hold wherever we can and hang on until it works smooth. So in the care of ducks, as in any other business, each works out the detail for himself.

#### IMPORTANT POINTS

For these reasons the student of duck culture may take heart, and, remembering the following facts and applying judiciously the instructions, work up for himself a paying and satisfactory business.

In our large plants, egg production begins in November or December and hatching in December or January continuing until June. Marketing starts in February or March and lasts until September. In June the young breeders for the next year are selected and separated, and in July or August the old ones are marketed. Most of these ranchers retain one to two thousand breeders. They market annually twenty to forty thousand young



FIG. 145. INDIAN RUNNER DRAKE. BRED BY R. E. OWEN, FULTON, N. Y.

ducks — mostly wholesaled to city markets.

The above described plants were begun in one of two ways — either small and with limited means like Mr. Rankin, or extensively with ample funds to carry it through the experimental stages.

To have ducks in December from young ducks calls for very special housing and feeding, and the profit depends on economic management of these and other items, including transportation rates. For example, it costs more in the Adirondacks and on Lake Champlain shore to house and feed breeders for January eggs, than near Boston or Long Island. Therefore northern duck farms can not compete profitably with those of milder climates with large markets nearby.

Our output must be regulated by our environments. Instead of a large plant we may run a small and inexpensive one; instead of selling at wholesale we may retail; instead of hatching in January we may begin in March or April. In short, we may sell to our summer hotels and boarding houses that are open during July, August and September. They prefer fresh fowls to those ordered from a



FIG. 146. FIRST PRIZE CAYUGA DUCK, SYRACUSE, 1913-14. BRED BY R. E. OWEN, FULTON, N. Y.

distance and the usual prices obtainable for ducklings are 20 to 22 cents per pound in July; 18 to 20 in August, and 16 to 18 in September. At ten weeks of age ducks can be made to average five pounds when plucked, which amounts to 80 cents to \$1 per duck.

That there is money in ducks for the small producer has been thoroughly demonstrated by the writer on her acre and a half farm, where she hatched, raised and marketed two thousand ducks per season on less than a quarter of an acre of land, buildings included.

#### PERSONAL EXPERIENCE

My entrance into the duck business was by chance. A nearby, first class summer hotel offered a splendid market for this fowl,

so I promptly began hatching from my five duck eggs per day. The next year I had fifteen females, and each year following I doubled the number of the previous year's flock until my breeders numbered 120. By that time I also sold a number of eggs for hatching and breeding stock. The feathers and down brought about one hundred dollars every fall and the manure greatly enriched our worn-out land.

The following facts concerning the characteristics peculiar to ducks I have found useful and valuable to know:



FIG. 147. FIRST PRIZE BLUE SWEEDISH DRAKE, SYRACUSE, 1912-13-14. BRED BY R. E. OWEN, FULTON, N. Y.

Ducks require very little artificial heat; practically none after the first two weeks, if hatched in April.

They need plenty of good air and dry bedding; damp and dirty sleeping quarters are fatal.

Yards 8 by 12 feet suffice for the first six weeks with a flock of 50 ducklings; or 16 by 12 until marketed. Shelters 6 by 12 feet for the large duck and a square 3 by 3 feet for babies are sufficient.

Sheds with wire netting fronts for the old, and for the babies rain- and wind-tight packing boxes, answer for beginners in the business, although a plain, rough house, separated into pens by wire netting, is a comfort to both ducks and owner. This kind of house is especially convenient if it has an alley at the back with a door from each run opening into it. Eighteen-inch wide netting for the little ones and twenty-four-inch for the grown fowls suffices.

Ducklings can not stand the sun after eating; they must have a shelter in which to rest. They should be kept out of the water

and the rain until their breast feathers are grown, and should never be allowed to swim except for the final cleaning, if for table use. Their drinking vessels should be so arranged as to submerge the entire bill without allowing the body to become wet. The little ones squirt the water through the nostrils and thus cleanse them. Otherwise, they become clogged and the ducklings smother unless the nostrils are dug out.

Ice cold or spring cold water if given to ducklings when overheated is fatal. Well water should stand in the sun until the chill is off before the fountains are filled.

Ducks should never have any food left before them. It should be promptly removed when the hunger of the flock is satisfied. Convulsions and other troubles are due to overfeeding or chilled water. This point, therefore, is very important.

#### FOOD

Ducks will live and thrive on almost anything, but to work them to their utmost capacity, every detail of the above suggestion should be carefully followed; especially as to their feed. Being always under full pressure, their digestive organs are very sensitive, especially during the last two weeks of forcing. For instance, the substitution of white for the previously fed yellow corn-meal is fatal to any gain in weight. They simply sniff and nibble at the mash, instead of relishing it as usual, and it takes a week or ten days to coax them back to their former appetites. They never give back the investment with interest, for ducks must be marketed at ten weeks to three months of age for profit. The same rule applies to all stages of duck life. Any change in either the ingredients or proportions must be gradual.

#### FOOD FOR DUCKLINGS

Water and a dish of coarse sand should always be kept before them.

Hard boiled eggs mashed fine and mixed with bread crumbs make a good food. This should be spread on a clean shingle and fed five times a day for four days, with a few heads of lettuce as a relish.

Corn meal, wheat bran, middlings and beef meal may gradually be substituted so that when fourteen days old they are eating, in a crumbly mash,  $\frac{1}{8}$  beef scrap to  $\frac{3}{8}$  corn meal, wheat bran and  $\frac{1}{4}$  wheat middlings. This should be fed four times daily and may be continued until the bird is six weeks old.

During the last four weeks, the corn meal and beef scrap should be increased to the proportion of  $\frac{1}{6}$  beef scraps,  $\frac{2}{3}$  corn meal and  $\frac{1}{6}$  wheat bran (by weight not measure). They will stay on this forcing food only for about two weeks, and the proportions must thus be regulated for ten- or twelve-week-old market birds.



FIG. 148. FIRST PRIZE ROUEN DUCK, SYRACUSE, 1913-14. BRED BY R. E. OWEN, FULTON, N. Y.

A wire basket hung on the yard fence where the ducks may have free access to it should be kept supplied with fresh lettuce.

When six to eight weeks old ducks need a lantern at night to avoid their stampeding and hurting themselves when frightened.

The breeders should be separated from market birds when eight weeks old, given free range and when convenient access to water, lake, river or pond. About a month before laying desired their ration may be changed to the following proportions: beef scrap,  $\frac{1}{6}$ ; corn meal,  $\frac{1}{2}$ ; wheat bran,  $\frac{1}{3}$ .

## INCUBATION

In artificial incubation, after the first week the eggs in the tray should be sprinkled with hot water at the close of airing. A whisk broom will serve the purpose of a sprinkler. This should be continued night and morning until the final "shutting up." In our Prairie State the pans are kept constantly filled with water. The ventilators are kept about half open and at the "shut-down" about three-quarters open.

The ducks should be removed to the brooder in the morning. Since the heat in the incubator is lowered to about 90 degrees, the brooder heat should be about 80 degrees as the ducklings' heat will raise it to about 90 degrees. This temperature of 80 degrees should be kept for the first week; the second week it should be reduced to about 70 degrees. When the ducks are two or three weeks old their own animal heat should be sufficient to keep the hovers normal. The general working of an incubator is the same for ducks as chickens.

## VARIETIES

We have a large duck family consisting of the Pekin, Aylesbury, Rouen, Cayuga, Call, East India, Crested, Muscovy, Indian Runner and Swedish varieties. They differ in plumage, form and carriage. Each is handsome in its own special way and has its own peculiar excellence and special admirers.

For market purposes these varieties all require the same general treatment. In market profit value the Pekin duck heads the list.

## TURKEYS

FRANCES E. WHEELER, CHAZY, N. Y.

It is interesting to know that the turkey is the natural product of America and was introduced into England, France, Holland and other European countries with other curiosities of vegetable and animal life, by the early explorers. In those days "turkey" seemed to have been the pseudonym for anything foreign, and thus our "King of the feast" probably acquired his *entré* title.



FIG. 149. WHITE HOLLAND TURKEYS.

The varieties of climate in America are doubtless responsible for the varieties of plumage and form that we find in our turkeys. Thus we have the hardy Black of the North and West—not so large or handsome as the mammoth Bronze of our South or the pigeon gray with coral head trimmings of the Slate or the brilliant Bourbon Red.

Although each variety has been cultivated to a high degree of excellence; of our leading strains, the White Holland alone is the result of artificial development, and for this Holland has the credit.

The white turkey is originally a "sport." Hollanders speedily discovered a preference for it and promptly eliminated all color from their flocks, retaining as breeding stock only the white fowls. Thus, in time, colored feathers disappeared, and black legs and feet. To-day

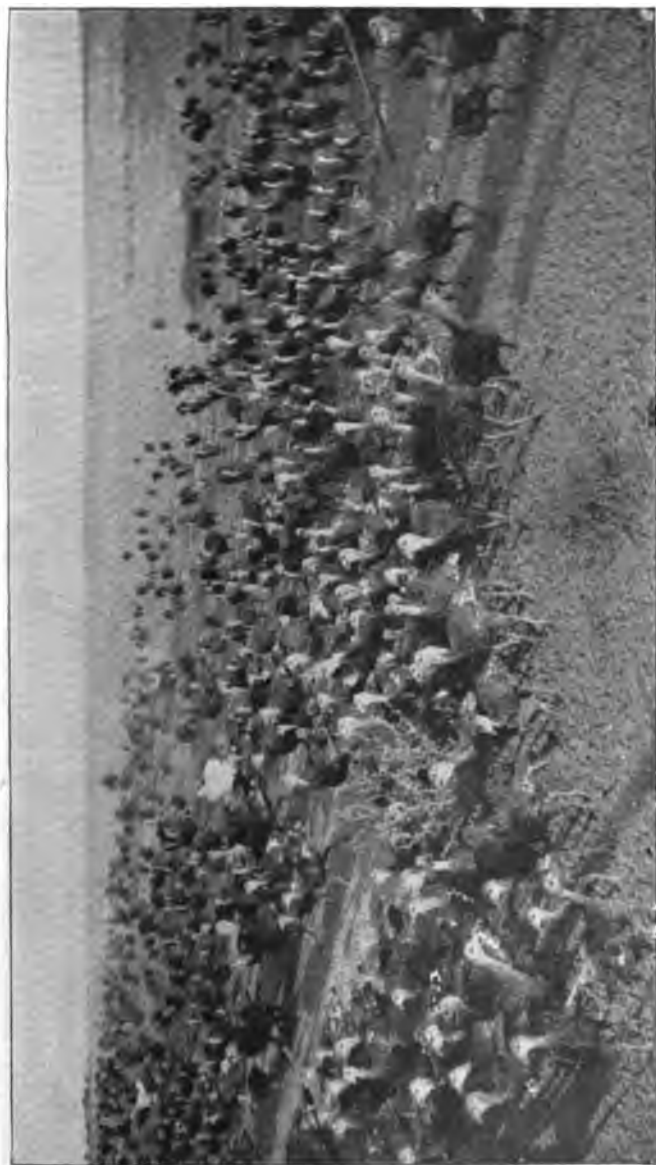


FIG. 150. FLOCK OF THIRTEEN HUNDRED TURKEYS.

the Holland is snow white with pinkish feet and legs and head trimmings of shaded blue, and scarlet. It is also characterized by a very full breast. The meat is of fine grain and is very succulent. As a rule, owing doubtless to early life in the land of dykes, White Hollands are non-roamers.

In size the Bronze heads the list, our standard calling for 36 pounds weight in the tom and 20 in the female. This weight is very nearly doubled, however, by our Bronze fanciers as is also the case with all varieties. The Bourbon Red comes next, then the Narraganset, the White Holland, Black, Buff and Slate.

The habits of the different varieties are similar and the rules controlling one are adaptable to the others. This may also be said of the turkey's roaming habits. The tom sets the pace. If he is wild and a roamer his hens will be the same; if of a calm and quiet nature his hens will follow his example.

To use an Irish paradox, "the turkey is our one domestic bird that has never been domesticated." It stands in the fowl family where our cat stands in relation to our horse, cow, dog, etc. It gives us a limited service but retains its independence, and beyond a certain point is not amenable to restraint. Like Kipling's cat, "It goes by its own wild lonesome." When this fact is fully understood, I believe the problem of turkey raising will be solved.

#### STUDY NATURAL HABITS AND ENVIRONMENTS

To make a success of any agricultural pursuit, study of nature and natural conditions is necessary. It is especially necessary for success with turkeys, because, thus far, every effort to adapt modern methods of food and yarding in caring for them have met with very doubtful success. In a few cases, it is true, the flocks go through the season all right; but for most of us turkey raising is discouraging.

First, I shall take you through the life of the turkey according to nature and you can compare and draw your own inferences between it and the domesticated condition of this fowl.

The mother usually selects her nest in February or earlier. She begins to lay in March or April, meantime foraging for herself through the woods and glens. It is early spring and there is not much growing, so her food must be light. She lays 18 to

then begins her four weeks of incubation. By April the poults begin to hatch. She then stays upon the nest from forty-eight to sixty hours.

When she moves it is at first only a few feet from the nest, and she broods her babies while they run in and out from the nest and grow strong. Then she walks with them leisurely, and takes a rest, with a minute fly, bug, seed or berry and there. Very little suffices for the poults' sustenance; their crops are tiny and hold very little.

When berries ripen they almost live on them. All summer long they wander and grow. In the fall and winter it is the turkey's nature supplies all they need in food and shelter. In the north where they roost in fir trees or thicket and thrive without human help. In the old pioneer days our woods were full of them. Our early settlers frequently found nests of eggs which they took home and set under hens. Thus a flock of tame turkeys grew up; but always foraging for themselves and living a free, vigorous and healthy life.

When our forests disappeared and cleared fields took the place of the old food and shelter is gone and in their place the artificial conditions of every sort, while, unfortunately for the turkey, the nature of the turkey remains practically unchanged and it cannot adapt itself to domestication.

The "changing" and "adapting" part of the business is, therefore, evidently up to us. It is our work, if we keep the turkey, to study it and so far as possible give to it its natural environment and food, or, as a substitute, a fairly true imitation of it.

#### NECESSITIES

First, all the turkey must have the right sort of roosting, and plenty of food.

Second, the ventilation must be generous and without drafts. Third, Roosts, walls and ceilings should be sprayed with disinfectant at least twice a week the year around. Fourth, the litter should be scattered generously on floor and ground. Fifth, exercise and food let them forage for themselves during the spring, summer and fall. At night, in order to en-

courage home roosting, feed a handful or two of grain. In the winter, corn stalks with the nubbins on afford fine exercise and furnish all the grain needed, so long as the nubbins last.

Wheat, barley and buckwheat make the best feed for turkeys. They should have no corn except in winter. Vegetables in winter are very important and of these turkeys cannot have too much. A flock of six turkeys will consume daily six good-sized cabbages.

Sour milk and buttermilk are also important items of diet, as they act on the liver and are a preventive to and destroyer of the blackhead parasite. Coal ashes furnish fine grit.

As already explained the turkey's crop is small and when overloaded, indigestion and liver trouble is sure to follow. This usually develops into the above so-called blackhead.

The cure of any disease is never so important as its prevention. To avoid indigestion, the turkey — as above suggested — must be fed lightly and the food should be of an easily digestible nature, especially when his range is limited. A turkey grows greedy and indolent under domestication and thus falls an easy prey to infections of all sorts, whether developed from the roost houses, the ground where they feed or in contact with their feathered kind.

Of course, anything out of the normal injures the egg production and thus hurts our season's output. We all know that sickness is expensive.

Practically every disease incident to the turkey is due to wrong conditions, and doctoring for roup, rheumatism, blackhead, sour crop and so on is simply one way of shutting the door when the colt is gone.

For example, if the turkey has not had sufficient vegetables during the winter, he is liable, in the early spring, to stuff his crop with the tough grass of the previous year's growth that the snow has kept green. It sticks, sours and rots there and to save the fowl's life the crop must be opened, cleaned out, rinsed thoroughly and sewed up again. The fowl must be kept quiet and fed lightly for a few days.

Under natural conditions the turkey descends from his roost in the trees with outspread wings and gently alights on the elastic grass; so, if housed, there should be between the roost and door



FIG. 131. MISS WHEELER AND HER TURKEYS.



a deep straw or hay litter. This will avoid the "bumblefoot" affliction of heavy fowls that roost high.

Turkeys will stand almost any amount of cold or rain if their livers are healthy; if they are not subjected to drafts and have a shelter when required.

It will be noticed that even where grain is scattered, the turkey's first rush is for grass or grit—the grain comes last. Their food should be scattered over as broad an area as possible, so as to give an equal chance to all.

The tom is a very greedy, ungallant fowl and is liable to grow too heavy. He has very sharp nails which are not worn down by tramping through forest and swamp, and in the breeding season these sharp talons are liable to bruise and tear the backs and sides of the females if they are not cut off and cauterized.

The instinct of propagation is very strong in the turkey and if her eggs are removed daily she will lay a larger number of them. When the supply is exhausted, she takes from two to three weeks to break from sitting. I have had hens lay four clutches, the last one in October. I had a turkey hen, which when persistently thwarted in her sitting, flew at the Wyandotte hen's poults (hatched from that turkey's eggs), catch one in her bill and promptly shake its life out. She did not stop until she had destroyed the entire flock. They seem to become fevered and crazed, and it is best for them and for their progeny to sit on at least their second clutch of eggs.

Success in turkey raising varies. Some years there is little or no mortality, and in others, considerable loss. Causes vary, but when breeders are healthy and not inbred, atmospheric conditions are the answer to, "Why?"

I had a flock of nineteen poults disappear with their mother when a week old. She carried them off about three miles from the heavy blasting near us. In the early fall she came home from the woods with her flock intact.

#### CARE OF THE YOUNG TURKEYS

We find very useful a roomy, portable coop for mother and babies for their first four weeks of life. They should be moved to fresh ground every day or two and fed fine-cut dandelion

leaves, sting nettle or lettuce, dry bread crumbs soaked in milk, curds and sour milk. Miss Margaret Mahaney deems sting nettle, cut fine, an absolute life preserver during at least the poults' first six weeks and she also gives them four drops of tincture of iron in one gallon of drinking water. If their livers are kept active the "shooting of the red" is not dangerous and, as said before, vegetables are best for this purpose.

The toms are hardier than the pullets, and we are liable if not very careful, to lose a large percentage of our most important and valuable breeders.

If the mother and little ones are confined, the ventilators should be at the top, under the cover of the coops, and the mother can be released pleasant afternoons for short trips. The little birds should be permitted to roam freely in and out of the coop when the grass is dry.

#### BEGIN WITH A SMALL FLOCK

Any one who undertakes turkey raising as a business would best begin with a few—say three to five hens and a tom. He should make a close study of them along the lines suggested until the habit of observation is formed and he can promptly detect any defect in old or young fowls from illness or accident. Then the number may gradually be increased according to our knowledge and facilities. A flock of six to eight hens and a tom may be boarded out or run on shares at a neighboring farm or several flocks on several farms. This is a common method of raising large numbers of turkeys when the owner's farm is small.

Artificial incubation and rearing is successful where intelligence and care are employed; but it must be borne in mind that eternal vigilance and well seasoned experience are required if turkeys are to be successfully raised in large numbers by artificial means.

For this last class of workers I would recommend Miss Margaret Mahaney's *Talk about Turkeys*, which is a most complete instruction, especially in the treatment of disease.

## BLACKHEAD

One who has a sick turkey can not be sure it is affected blackhead until it is dead. Then it is small satisfaction to cover at post-mortem examination the round discolored ring on the liver which tell the tale beyond cavil. However, a examination of the droppings with a microscope will disclose the parasite that does the mischief.

When the liver is out of order the droppings are yellow and loose. This is the beginning of the end. Separate the affected one from the flock, disinfect the roosts, etc., and sprinkle slaked lime on floor and ground. A turkey which moves about stiffly and has yellow droppings is a fit subject for hatchet or d.

*Remedies for Grown Turkeys*

Disinfect the head and under the wings with salve. Massage the crop gently to see if it is full of undigested food. If so administer a half teaspoonful of Epsom salts in a little water. In an hour give a tablespoonful of olive oil and shortly after a quarter of a tablespoonful of salicylate of soda in two tablespoonfuls of warm water. When the crop is emptied keep the turkey warm in a packing box with a straw litter and burlap covering. Give a teaspoonful of whiskey in a little warm milk. Watch the droppings and if yellow give a Mahaney pill every hour until normal.

If the crop gives only a brash of sour wind, omit the whiskey and sour milk and the pills at once. Keep the turkey warm for a few days and then disinfect thoroughly before returning to the flock. Watch the droppings every morning and use plenty of lime. Twice a week set before the flock a earthenware dish a level teaspoonful of powdered sulphur and iron to a gallon of water. At night in same amount of water give a level teaspoonful of salicylate of soda. This will keep the fowls in good condition.

*Blackhead in Young Turkeys*

in young turkeys first takes the form of an ordinary head followed by loss of appetite, drooping wings and

the head and under the wings of the affected bird. Let the entire flock twice a week. Dissolve five lbs in a little warm water and add to this a quart of

Set before the young turkeys in an earthenware at this every day. Keep them warm, clean and dry all rapidly improve.

Apply a little salve on head and under wings twice a morning.



FIG. 152. FLOCK OF EMBDEN GESE.

## DOMESTIC GEESE

SARAH A. LITTLE, CLYDE, N. Y.

### HISTORY AND DESCRIPTION

Chambers' Encyclopedia describes geese as "a genus of web-footed birds. one of the sections of the Linnæan genus *Anas*, having the bill no longer than the head, more high than broad at the base, the upper mandible being slightly hooked at the tip."

The legs of the goose are not set so far back as those of the duck, which gives it greater ease and endurance in walking.

Its sixteen vertebræ distinguish it unmistakably from the swan, which has twenty-three. Though resembling the goose in some points, the swan belongs to the



FIG. 153. GEESE ON FARM OF SARAH A. LITTLE, CLYDE, N. Y.

duck family and constitutes a very distinct section of that family.

The feathers on the neck of a goose are disposed in ridges, and look as though they had been dressed with a very coarse comb.

Geese spend more time upon the land than in the water, though they dearly love to swim. They feed largely on grass, growing grain, berries, seeds and other vegetable matter, as well as on ripe grain. They will follow the plow in the early spring, eating the earth worms brought to the surface, but for the most part they prefer grain and tender herbage. Little toothlike projections along their bills enable them to cut off the grass as closely as sheep.



FIG. 154. "EMPRESS," PRIZE WINNER, N. Y. STATE FAIR AND MADISON SQUARE GARDEN. OWNED BY SARAH A. LITTLE, CLYDE, N. Y.

The domestication of geese must have taken place at a very early period in the world's history, as they figured on many ancient Egyptian monuments. The Romans paid much attention to rearing and fattening them, and it is a matter of history that the clamor of geese saved Rome from her enemies.

Even in very early times goose feathers were highly esteemed and were in great demand. The Romans bought great herds of geese in Gaul and drove them long distances.

Geese have become very popular in Germany in recent

years. All the geese of a village are gathered in one flock each morning and driven by a special caretaker to suitable pastures where water is abundant. At night they are driven back to the village. Each individual flock detaches itself from the herd without guidance as it nears home, so strong is their home instinct.

When men learned to express their thoughts in writing, the tough, flexible, dependable quills of the goose were fashioned into pens which served their purpose so well that even at the present time they are not completely abandoned.

All geese lay two clutches of eggs in spring if not sit, and there are instances where a third clutch is laid in autumn. This is not desirable, since it takes from the strength of the birds.

## VARIETIES

Geese usually found in domestication, the Toulouse, African and the two varieties of Chinese are most seen, Canadian wild geese are sometimes bred on farms.

Toulouse is the largest of domestic geese, the standard call-weight of twenty-five pounds in the adult gander. They come from the town of Toulouse in southern France. Their plumage is gray for the most part, though the under part of the abdomen extending to and around the tail is white. Good layers, docile, and, in common with all domestic geese, eggs from adult birds hatch well and are easily reared. Embden or Bremen goose is a little smaller than the Toulouse, built on generous, graceful lines, and its pure white, elegant and stately carriage makes the breed very popular. Embden and Bremen are North German cities, where these geese were bred and from which they take their names. A young Embden is known to lay fifty eggs the first season, but this is not true of all. The eggs of adult Embdens are very large.

Standard weight for African geese is the same as for Toulouse, though they look smaller, probably because their legs are closer to the body. They are prolific layers. Their plumage is black on the heads, with shades of brown and gray so well blended that their "color scheme" leaves little to

be desired. On with the Toulouse the adult birds have a dewlap, a skin flap covered with tiny feathers beginning at the lower throat and extending a little way down the neck, its size increasing with the age of the bird. Young birds rarely show this. African and Chinese should never have it.

Chinese geese are small, the adult gander weighing twelve pounds. There are two varieties, the Brown and the White. In the African, they wear a big knob at the point where the lower mandible of the bill joins the head. They have long, straight legs, which are usually extended. The color markings

in the Brown Chinese are much like the African, but the color is in shades of brown. The White variety are smooth, glossy white, and many think them the most beautiful members of the goose family. They surely are the best layers of all geese, continuing to produce eggs well into the fall.



FIG. 155. BROWN CHINA GEESSE. OWNED BY R. E. OWEN, FULTON, N. Y.

#### PLUCKING

Opinions differ in regard to plucking geese. It is a cruel practice, though many regard it as unwise to allow the soft, beautiful feathers to go to waste. Birds intended for exhibition are rarely plucked, as the plumage is finer after a natural moult. When geese are well fattened, plucking them for market is comparatively easy. The method with which I am most accustomed is to immerse the carcass in hot water, lift it out to air, then give a second dip; roll it in a sack and leave from five to ten minutes to steam. If the feathers do not come easily give it a third dip and begin picking. Have the body suspended by the legs so that the work may be done sitting. Remove feathers and down at the same time. Only a few feathers at a time should be taken to avoid

tearing the skin. When all feathers and down are removed, a dip, first in hot water, then in cold, makes the carcass look plump and attractive.

#### FATTENING FOR MARKET

Geese are easily fattened in the fall and early winter. A large share of their food should be shelled corn whole, cracked or in meal, as is most convenient. They should be fed all they will eat. This should be supplemented by cabbage or shredded roots, with plenty of grit and water in easy reach. They will often put on ten pounds or more in a month.



FIG. 156. WHITE CHINA GESE. OWNED BY  
R. E. OWEN, FULTON, N. Y.

If they have clean water for swimming, geese will be clean for the show without help from their owner. Nature teaches them all the "beauty lessons" needed, but they must be "fat and well liking" to win at the show or to please the butcher.

Geese are highly regarded as food, although some object to their oiliness. If steamed for an hour or more over boiling water, much of the oil is melted out and the flesh is much improved.

#### MATING

Geese often choose their mates long before the breeding season begins, so that it is wise to buy breeding stock early. Two geese

to a gander — never more than three — is a safe breeding. It is wise to keep the pens separate, as the ganders fight furiously, often giving each other severe hurts in their battles. Geese are very strong, large wings, and a full blow from them is not painful, but dangerous.



FIG. 157. FIRST PRIZE GOOSE  
AND GANDER, MADISON SQUARE  
GARDEN. OWNED BY SARAH  
A. LITTLE, CLYDE, N. Y.

## SQUAB RAISING

GEORGE L. GILLINGHAM, MOOERSTOWN, N. J.



The extent of this business is not generally known far outside of the districts where it is conducted most extensively. The production of squabs for the markets of our large cities is an industry that has reached considerable proportions in some parts of our country. Although the numbers have increased yearly, the prices have been maintained, and have advanced during the late high prices for meats, which shows the demand to be unlimited.

Scarcity of game all over the country compels the proprietors of the large hotels and restaurants to look for something to fill the place, and at the same time to be sure of a supply all the year around. Therefore they may have hit upon the squab to fill the bill, and it now frequently happens that where one calls for a cold roast or orders of that kind, it will be found that the meat was raised in some pigeon loft, and is much younger and more tender than the quail would have been could it be found.

Squab raising is well adapted to village lots and can be conducted in connection with poultry raising by women and young people. It need be, or by those whose active business claim their time, during the middle of the day and who desire some occupation with a profit attached to it, the labor connected with it is not heavy. It is particularly adapted to women who wish to add something to their income — in fact, women are more apt to succeed in it than most men. It requires close attention to the details, and women are, as a rule, more patient and careful with small details and are therefore more successful. The small things go to make up the final profits; and, unless one is willing to take special care of the minute details, he or she cannot attempt the business.



## EXTENT AND PROFIT OF THE BUSINESS

extent to which this industry is conducted in some parts of the country may be shown by stating that in a small New York town of about 3,000 inhabitants the purchases of one dealer in one year was 56,582 squabs, for which he paid \$16,400; another buyer in the same town bought a little over half as many, making the aggregate to 86,000, for which the growers received \$25,000. Another grower in the same county shipped from his town loft between 20,000 and 25,000 birds, and is still actively in the business.

Cost of the feed and care for a working loft of birds is about one dollar per pair per year. Some put it lower; but, at the present price of feed, if proper care is given we should not figure lower than this.

A healthy working pair of birds should produce from ten to twelve pairs of birds per year, generally an average of not less than eight for the entire house. The prices range according to the grade of birds from \$.25 for poor culls to \$.75 or \$.80, in some cases over \$1.00 for the best. They are graded according to weight, those weighing 12 pounds per dozen, known as "big boys," bringing the highest price. The next sizes are 10 pounds, 9 pounds and 8 pounds per dozen; when less than 8 pounds they rate as culls, in which there is no profit. The first thing to take into consideration is

## BUILDING AND EQUIPMENT

need not be expensive, but according to the taste and the builder and the amount of capital he wishes to put into the business. The houses should always be placed where the soil is good, preferably upon a dry knoll facing the south or east.

Wagon paying lofts have been made by fitting up unused wagon-woodhouse lofts. Other houses have been constructed on the ground floor and pigeons the story above. A great care must be exercised to have the floor well planed and grooved boards to keep vermin from passing to the poultry. When houses are built on the ground the floor should be made of cement to insure perfect dryness, but

need not be expensive. A floor one and one-half or two inches thick is sufficient, for there is very little weight on them, unless it is a stable floor for horses or cattle. These, as well as the floors above, should be covered with one inch of coarse dry sawdust. Attached to and in front of the house, a fly should be constructed to afford exercise for the birds in the open air and sunlight. These should be the full width of the house or each section of the house, extending fully 25 or 30 feet in front. They should be made with strong posts set in the ground and fastened together with six-inch slats, and the whole covered with wire netting of not over one-inch mesh, or one will feed more sparrows than pigeons. Avoid any cross boards in the middle of the fly to obstruct the flight of the birds, as this would often result in the injury of birds on occasions of sudden flight.

Very large flocks should not be kept in one room. From fifty to one hundred pairs is enough to keep together for the best results. A room 10 by 12 is ample for fifty pairs of working birds. A house may be built of any desired length, twelve feet wide, divided into apartments of the size stated by wire partitions, with doors hung on spring hinges to facilitate passing through in feeding. The house should have windows on the south side, of sufficient size to afford ample light in all parts of the house, and, moreover, as unnecessary glass makes the house too cold on winter nights.

#### CONSTRUCTION AND CARE OF NESTS

Each pair requiring two nests, (as they are often sitting in one nest while raising a pair of birds in another) there should be two as many nests as there are pairs of birds, with eighteen to twenty to spare so they may take their choice. These nests should be about 12 x 10 inches and 8 inches high for ordinary sized birds of the Homer breeds, and should be so constructed as to be easily cleaned and at the same time occupy the entire space along the wall or side of the house.

The ideal nest is made with a loose bottom slid in on cleats. In cleaning, these bottoms are pulled out like a drawer, cleaned with one stroke of a trowel and replaced. They are made with boards ten inches wide. On each side of these boards cleats are nailed



FIG. 159. VIEW ON LARGE POULTRY PLANT WITH 1,200 WORKING BIRDS, AND AN OUTPUT OF 25,000 SQUABS PER YEAR.

eight inches apart, and the boards are placed on end and fastened to the side of the house twelve inches apart, extending from the floor to the ceiling. When in position, boards cut twelve inches wide with strips three inches high nailed on one side are placed on these cleats and from the bottom of the nest, the three-inch cleat forming the front to keep the nest in place and the young from falling out.

These nests occupy the entire side of the house with no waste space and no outside footrest for birds to light upon and drive others from the nest as cross birds will sometimes do.

The period of incubation is eighteen days, the hen sitting on the eggs, excepting about four hours each day, when the cock bird takes her place while she is feeding and resting. This brings us to the importance of the feed and care.

#### FEED AND CARE

During incubation a substance forms in the crops of both birds, known as pigeon milk or curd, on which the young are fed for the first five or six days, until they are old enough to digest grain which is carried to them in the crop of the old birds and which is disgorged from the crop to the mouth of the young bird by the same process as the pigeon milk is fed.

It is very important that the proper feed be given, which should consist of a variety of grains and seeds — the larger variety the better. Their food should always be sweet and clean and absolutely free from any musty or spoiled grain, as nothing will cause the death of young squabs more quickly than sour or spoiled food.

Cracked corn, rather coarse — preferably about three or four pieces from a single grain of corn — should be fed in troughs or hoppers so constructed that they cannot throw it out and waste it, which they will frequently do in searching for other seeds of which they are more fond. The other seeds should consist of whole wheat, Canada field peas, Kafir corn, hulled oats, millet and hemp seed, and should be fed on the floor twice daily. The birds should be given all they will clean up quickly, feeding hemp but twice or three times per week except in the moulting season, when a small quantity may be fed each day. Hemp is very fattening, and if it is fed in excess bad results may follow. Do not feed wheat too liberally and always mix with other grain, using the hard red

Never use new wheat, as it has a tendency to loosen the crop of the young birds, sometimes with fatal results.

In connection with feed they should be furnished with ground bone meal, a liberal supply of salt and small bits of charcoal and red oxide of iron. The salt is necessary to keep them in good health. These may be kept in small boxes around the houses where the birds have free access to them.



INTERIOR OF HOUSE, SHOWING CONSTRUCTION OF NESTS, WITH BIRDS ON THEIR EGGS.

A liberal supply of pure water should be kept before them at all times, near the feeding troughs; and should be supplied fresh every morning before feeding that the old birds may have access to it immediately afterward, before taking feed to their young. Running fountains may be used if care is taken to keep them perpetually clean in summer. Metallic ones may be used in winter to protect from freezing. In our practice we have found wooden ones very satisfactory, the birds perching on the edge to drink. They are easily cleaned and the birds seldom get into them to foul

Now come to one of the most important features of the

## THE SELECTION OF THE BREEDS

In stocking the houses always avoid using common birds, as the results will be disappointing. They are not prolific and are more liable to produce dark squabs, which always bring the lowest price in the market, and they do not feed their young so well as the full bloods.

Be careful in starting not to buy out a loft of old birds that the owner is anxious to sell, as there is generally some fault which prompts him to wish to sell; besides, you never know the age of your loft of birds; they may be so old they are practically worn out. If possible to do so, always start with young birds right from the nest, as soon as they are old enough to do without the mother's care; one will be a little longer in receiving returns, but will gain in the long run, the exact age of the birds being known. They will mate and begin working in from three to five months, according to the season, and will continue to do so for eight or ten years.

In taking the young birds from the nests, they should be placed in a separate house or mating room. As soon as a pair is mated and ready to build, place them in the permanent house and they will remain mated as long as they both live. By this method it is certain that all of the birds in the house are mated pairs.

The best all-around birds for squab raising are the American Antwerps or Homers, as they are the most active, are good workers, have quiet dispositions and are the best feeders of their young. Other good varieties are the White German Homer, the Belgian Homer, The Dragoon, The Duchesse and the Runt, ranking in the order named.

The White German Homers are the handsomest of birds, with pure white plumage and red legs and eyes. They are smaller, not quite such good feeders as the American Homers, but very prolific. The cross between the two makes ideal birds for market, as they seldom if ever produce a dark squab. The squabs generally run 8 pounds per dozen, while some of the larger breeds produce 12-pound birds. The Homers outstrip them so much in quantity that they are more profitable in the end.

The Dragons are larger birds than either of the other breeds, but it takes five weeks for them to grow a pair of birds, while the



FIG. 161. YOUNG SQUABS IN NESTS. (1) SQUABS TWO WEEKS OLD; (2) BIRDS THREE DAYS OLD; (3) FOUR WEEKS OLD — READY FOR MARKET.

others will complete the process in four — a difference in feed and cost which amounts to considerable in a year from a large flock.

The Duchesse is a large bird, but slow as a breeder. It has heavily feathered feet and legs, which is a disadvantage in dressing, as well as in the liability of breaking the eggs or throwing them out of the nest when leaving it quickly.

The Runt is the giant among the pigeons, as well as the slowest and poorest worker, seldom producing more than four pairs a year. They make a good cross, however, with the Homer or Dragoon, but even then will not produce so many as either of those breeds alone.

#### THE SQUABS

When young birds are two or three weeks old, the old birds build another nest and begin to sit again, the cock bird taking most of the care of the young until they are ready to leave the nest. Thus a good pair of working birds have a pair of young and a pair of eggs a large portion of the time.

In a business of any kind it often happens that close attention to some of the little things amounts to considerable in the course of a year, and in this business it is very important. It frequently happens that one egg is broken or proves unfertile, leaving but one bird to be hatched. When this occurs in two nests hatching near the same time, both young birds should be placed in one nest, as the old birds will grow both for the market as quickly as one, and the other pair will go to building again. When a large number of birds are kept, the income may be very materially increased in this way in a single year.

Great care should be taken, however, how and when this is done. In the first place, do not make the exchange under five or six days, or until the old birds have fed some or nearly all of the curd into their crops as previously mentioned. Curd will harden in the crop, causing them to sicken — if repeated, sometimes with fatal results.

In the second place, if there is a difference in the age of a day or two, always place the older bird in the nest of the younger rather than vice versa, as the parents of the older bird may have used the pigeon milk or curd and begin to use grain, which the younger could not digest and which would cause trouble and perhaps death while the older bird will still take the feed the younger one is receiving and thrive on it.

squabs are dressed once a week on regular shipping days, before they are large enough to leave the nest, and when they are fully feathered. Always dress with empty crops. They may be dressed in the early morning before feeding, but preferably the afternoon, after the old birds have fed them for the night, and before they are shipped, when they will be sure to be in the best condition.



FIG. 162. PAIR OF JUMBO SQUABS READY TO BE DRESSED FOR MARKET, WEIGHING 14 POUNDS PER DOZEN.



#### VERMIN AND SANITATION

A careful watch should be kept for lice, which, if allowed to get into the house, will be hard to get rid of and will cause great loss. No stems and no other substances are used for nesting material. There will very rarely, if ever, be any trouble from this

Some of these stems should be kept in one corner of the house and the birds will make free use of it, using what they

need in building their own nests, which should be cleaned out and taken from the house after each pair of squabs have been removed.

During the summer months the birds should be furnished, two or three times a week, with a shallow tub of water in which they may bathe, which will help to keep them free from vermin. The tub should be emptied after they have bathed, as they should not be allowed to drink water which they have fouled.

#### DISEASE

With good care, properly constructed houses, and wholesome food, never sour or tainted, very little disease should be encountered.

Preventives are better and more easily administered than cures. Some of these are dry houses, pure water, regularity in feeding and cleanliness. The water buckets should be washed out frequently, especially in hot weather, with creolin water made by adding one teaspoonful of creolin to one quart of water. This is a good disinfectant and will kill any disease germs that may be present. A few drops of laudanum may be put into the drinking water once or twice a week, and occasionally a few drops of nuxvomica. This will keep the birds healthy.

If a sick bird is noticed, however, it should be removed from the flock at once and the rest closely watched, taking all precautions to disinfect. At moulting time some birds have difficulty in getting rid of the large tail pinions. They are noticed to droop and cease to feed, and may become sick and even die, by "going light," as it is called by pigeon growers. These should be caught and the tail feathers pulled, which in most cases will prove effectual if done in time. If not taken in time, the weak condition of the birds makes them susceptible to other forms of disease, which may prove contagious in the end.

#### IN CONCLUSION

First. Get good stock, preferably young birds, to begin with. Do not buy old lofts some one else is tired of.

Second. Use the pure stock or their crosses only — never common birds.

The straight Homer is the best all-around bird for squab good cross with it being the Runt or Dragoon.

The Dragoon is good, but takes one week longer to grow

Take care of the small things, as it is the multitude of rein the profit lies.

The demand for squab is constantly increasing, and is to do for a long time to come.

There may be other problems which will present themselves, but we have become accustomed to the habits of the birds the solution be so plain that "the wayfaring man though a fool" (in business) need not err therein.

## GUINEA FOWLS

B. J. DODGE, VERONA, N. Y.



The *numida meleagris*, a fowl of the gallinaceous order is a native of Africa, but like the domestic chickens has followed the advance of civilization until it is known probably in most of the civilized countries.

The guinea is a bird of the farm, the range, and the forest; being a great forager it would be as much out of place in the city as the turkey or pheasant.

The guinea resembles no other domestic bird in appearance. There are two varieties, the pearl and the white, the color being the only difference. The pearl, which is the more common of the two, is of a bluish gray color closely dotted with small, white spots — hence its name. White feathers are inclined to appear in the breasts and wings. The white variety is pure white throughout. In both, the head is destitute of feathers and has a hard, pointed knob or horn on top in place of a comb, and bright red wattles, the latter being somewhat larger on the male than on the female. The face is opaque white; the neck of medium length and very slender, and the legs short and free from feathers and of orange and black color. The general form and appearance is like the pheasant, and, while they are ornamental in appearance and generally classed with the peacock, they might be more properly classed with pheasants and other game birds.

Guineas are great foragers, ranging far from the farm buildings but returning home at night where they roost with other fowls. By nature they are somewhat domineering over other fowls and when they occupy the same quarters at night, it is well to fasten upright strips of wood to the perches to prevent a guinea from crowding the other fowls off the perch.

They do very little scratching and therefore do very little damage in that line if they visit a neighbor's garden. They are

great insect eaters and it is a very pretty sight to see a flock spread on a hunt across the field with heads carried low, alert, quick and keen, searching for bugs.

The young, if left to themselves for the first few weeks, live almost entirely on insects. Guineas eat freely of almost any food and all kinds of grain fed to domestic fowls.

In the northern climate they begin laying about the first of May and will frequently continue until November, but never during the winter months, which is perhaps one reason why they are not more generally kept. The eggs are small, weighing about eighteen ounces per dozen, brown in color, very pointed and have the hardest shell of any egg known.

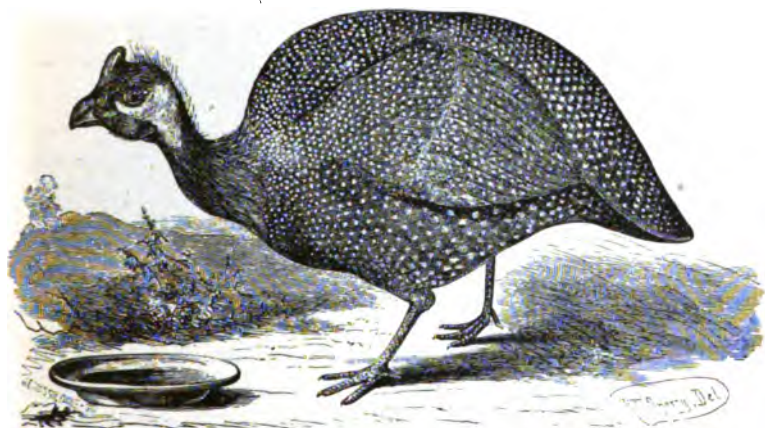


FIG. 163. TYPICAL GUINEA FOWL.

Guineas delight in depositing a large number of eggs in one nest. We once found a hen sitting on forty-two eggs, and, as they were imbedded in muck three layers deep, she was covering them all, but the hatch was nearly a failure. Two or three hens will lay in the same nest, but when one begins to sit her mates appear to respect her wishes — with reason, perhaps — and select others for themselves. The hen will generally begin laying in the barn or with other hens, but as soon as there is grass and weeds enough to offer protection she chooses a place in the fields, sometimes in a fence corner but generally in the open, surrounded only by grass or a few weeds and seldom under anything.

When attacked, a guinea literally "goes up in the air," and wants nothing in the way of so doing when on the nest. The nests are hard to find, but the hen has a peculiar cry which frequently makes. This is never heard except when she is on the nest, and aids one in readily locating her hiding place. It consists of several short, sharp notes ending with one long drawn out note, and sounds like a cry of distress, but is not.



FIG. 164. FEMALE GUINEA ON LEFT.

It is claimed that a guinea will desert her nest if the eggs are touched by a human hand, and that a spoon should be used to remove the eggs from the nest. This is not so. It is true, however, that she is more readily broken up than the common hen. A number of eggs should be left if it is desired to have her remain on the nest, instead of reducing the number to the proverbial egg.

The eggs may be hatched by the common hen, in which case the young chicks, or keats as they are called by some, should be separated from the hen and, if young turkeys, be penned up for a few days until they have learned the call of their foster mother. The period of incubation is twenty-eight days, and owing to the habits of the birds in laying, "next to nature," the eggs are generally very fertile. The newly hatched chicks are a beautiful sight and so small one would wonder how they ever got out of the thick shells.

Chicks of the pearl variety are brown in color when first hatched, much like a Brown Leghorn chick, with orange colored

bill and legs. They are as alike as peas and as they run all in a bunch it is almost impossible to accurately count more than twenty of them.

Guineas do not pair. A number of hens may be kept with one male bird. He may frequently be found near the sitting hen, and when she comes off with her brood he hovers them and will fight for them as readily as the mother bird.

Owing to much of the loss of chicks being caused by running in the dew and wet grass, it is better to have the chicks hatched in July when the meadows are mowed and the pastures short, therefore the hens should not be allowed to sit before June 10.

As soon as the wing feathers grow on the young birds, which is in a few weeks, the mother bird takes them to roost and they are practically raised, the losses from that period on being very small.

It is amusing to see a bunch of young guineas scratching among themselves at roosting time; they will hammer away at each other's heads, as often missing as hitting, their rules appearing to be like the Irishman's, "Wherever you see a head hit it." Their battles among themselves are nearly always bloodless.

It is almost impossible to distinguish the sexes until the birds are well matured, and even then close observation is necessary. A good way to discover the sex of a bird is to shut it in a coop out of sight from its mates and note



FIG. 165. MALE GUINEA

its call. If a female, the call will sound like "buckwheat, buckwheat." This is the particular call of the female. The male's call is a short "chit, chit," followed by a harsh noise like a buzz

saw. When excited or angry the female will make the same noise as the male, but never vice versa.

As the male bird becomes more mature he flushes his wings and runs about on his toes when in the company of other fowls or at feeding time, darting about and challenging the others for a fight.

Guineas have a reputation of driving away hawks. Although we have never seen a guinea attack a hawk, we do not doubt their willingness to do so if the hawk came into close proximity; but with their great alertness and shrill voice they will give the alarm on the approach of the hawk, thus giving the other fowls more time to get to cover.



FIG. 166. GUINEA FOWLS ON FARM OF B. J. DODGE, VERONA, N. Y.

At a sight of a hawk they become very excited, and at the sight of a snake, a skunk or a dog will make a noise that would jar the nerves of any ordinary canine. If he be a prowler he will slink away before he attracts further attention, but if old Towser screws up his courage and rushes them they go up in a tree or on top of the barn where they jeer at him derisively until he retires to his kennel in disgust at the silly things. The wing feathers are strong, and a flight of twenty or thirty rods or to the top of a large building is easily made. Yarding them would be next to impossible without covered runs.

native of a warm climate they stand the cold of our winters well and are healthy. They are claimed to be more free from disease than any other kind of poultry, and, unlike the hen, the guinea hen grows better with age and a hen three years old will lay as many eggs as a young hen and her mother. Neither is it necessary to introduce new blood to a flock frequently.

Guinea fowls will cross with the common chicken, but we have not seen it to occur where there are both sexes of each fowl, in a free range. The crossbred fowls are sterile.

Guinea fowls hatch, as with turkeys and pheasants, are not delicate. Their young chicks can often be reared if given food for rapid growth, such as boiled eggs, bread crumbs, meat scraps and chopped onions, followed later by small grains as millet, etc.

The natural diet causes them to rank as game birds and they are sometimes kept in large numbers in parks and preserves. They are more numerous in the southern states, which are more tropical in climate.

Guinea fowls use the eggs, though small, have a large yolk and contain much fat, while in the bird the amount of fat is less and proportionate. There is no white meat in guinea fowls and the appearance before cooking is not attractive; but they are in reality a delicious food and are in demand at hotels and club houses, being sometimes used as a substitute for partridges. They are sold in pairs for the pair, and in size the demand varies from one to three dollars each. The weight of a mature bird is about three to four pounds. After partaking of a plump, well-cooked guinea one is led to say their last end is better than their

Large flocks of guinea fowls shows a few birds will be found. There is no special care for them and they are judged principally on size, appearance and uniformity of color. Those who raise guinea fowls of different kinds should include a few guineas. Their

free, happy-go-lucky ways, their ability to care for themselves and their clean, trim appearance makes them a bird both able and profitable.



## POULTRY AS A FOOD

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Farmers' Institute Lecturer

"And every Sunday 'twas his lot  
To have a pullet in his pot."

It is rather a far cry from the sentiment, common when these lines were written, that a diet of "pullets" was within reach of even the slimmest purse, to the present-day knowledge of the cost of living gained from such an experiment as is quoted in the Cornell bulletin on "The Cost of Food." This experiment shows that, owing to the large amount of waste, the actual cost of a pound of cooked chicken compares with the cost per pound of live weight as follows:

Cost per lb. Live weight	WEIGHT			Cost cooked meat per lb.
	Live	Dressed	Edible meat (cooked)	
16 cents	4.65 lbs.	4.09 lbs.	1.11 lbs.	74 cents

If, by the time it is cooked, our chicken is going to cost us 74 cents per pound, it behooves us to find out whether we can afford to buy chickens for the table if we do not raise them ourselves; and whether, if we do raise them, we can afford to eat instead of selling them. It is necessary, first, to find out what nutrients are contained in chicken, so that we may know what we are spending our money for. Prof. Atwater gives the following figures:

Broilers contain 43.7 per cent. of water, 12.8 per cent. of protein, 1.4 per cent. of fat, and .7 per cent. of ash.

Fowls contain 47.1 per cent. of water, 13.7 per cent. of protein, 12.3 per cent. of fat and .7 per cent. of ash.

The second essential is to learn how much energy value there is in a pound of chicken, or, in other words, what return our investment of 74 cents will bring. The 305 calories of energy yielded by a pound of broiler, and the 765 calories yielded by a pound of fowl compare discouragingly with such other animal foods, as, for instance, a loin of mutton which gives a return of 1,415

calories for every pound. However, in comparing the combination of chicken and of mutton, it is evident that the higher value of mutton is due to its larger percentage of fat. As a source of energy, there is no doubt that chicken is "poor." But if our desire is to buy a large amount of protein with little fat, we get that combination better in buying chicken than in any other animal food.

Chicken, particularly the white meat, is one of the first meats that may be given to children and to convalescents. It is evident, then, that we cannot cease using chicken, but it is also evident that we must so prepare it as to insure the greatest degree of wholesomeness and palatability, as well as the lowest degree of waste. Both flavor and keeping qualities are affected by proper bleeding, dry picking, and quick chilling.

In buying a bird for the table, see that it shows "a rounded form, with neat, compact legs, and no sharp, bony points on the breast. The skin should be a clear color and free from blotches and pin-feathers; if it looks tight and drawn the bird has probably been scalded before being plucked. The skin should be neither flabby nor stiff, but should give evenly and gently when pressed with the finger." (LANGWORTHY)

In young birds the cartilage at the end of the breast-bone is soft and pliable. Always buy chickens with the feet on, so that they may be broken at the knee joint and all the tendons be removed, unless you are sure that this has been properly done. If the tendons are left in, they become hard and tough during cooking and thus spoil what might be a tender and palatable piece of the chicken. Always see that the lungs and kidneys have been removed. Make an incision on the back close to the tail and remove the oil bag.

#### METHODS OF PREPARATION

##### *Broiled Chicken*

(Birds averaging 1½ pounds)

Clean, wipe, and split down the back. Sprinkle with salt and pepper. Put on a greased broiler and set over a drip pan full of boiling water, using a second pan to cover the chicken. Steam in a hot oven for twenty minutes, then broil until evenly browned.

*Fried Chicken*

(Birds averaging 3 pounds)

*Fried Chicken* (Marion Harland). Cut up  $\frac{1}{2}$  pound pork in a frying-pan, and fry until the grease is ex-  
posed but not until it browns. Wash and cut up a young  
chicken in salt and water half an hour; wipe dry, season  
with salt and dredge with flour; then fry in the hot fat until  
it is a rich brown on both sides. Take up, drain, and  
put in a hot, covered dish. Pour into the gravy left in the  
pan a cup of milk — half cream is better; thicken with a  
tablespoonful of flour and a tablespoonful of butter; add some chopped  
parsley and pour over the hot chicken.

*Roast Chicken*(Birds averaging  $\frac{3}{4}$  pound)

*Roast Chicken* (Lowney's Cook Book). Remove pin feathers,  
cut out tendons, draw skin back from neck, cut off neck  
joint, and cut out oil bag. Make an incision between the  
wing from the breast bone down, and through this open-  
ing remove the entrails.

When taken, all of the internal organs can be removed at  
the same time by separating the membrane enclosing the organs from the  
raw windpipe and crop through the neck opening.  
Make an incision in the breast.

Wash inside of bird with cloth wrung out of cold water, re-  
move clots of blood. Wipe, stuff, sew up openings, sprinkle  
with salt and pepper, dredge with flour, place on rack in dripping  
pan and brook fifteen minutes in a very hot oven. Then dredge  
with flour, reduce heat, and baste every ten minutes until  
done, unless a double roaster is used. Allow fifteen  
minutes the pound for roasting.

*Stuffing for Roast Chicken*

Use soft bread crumbs, few drops onion juice, one-quarter  
cup butter, salt and pepper, one tablespoon poultry sea-  
soning, one teaspoonful chopped parsley. Mix ingredients in order  
until a moist stuffing is desired, add hot water until of the  
desired consistency.

*Fowl Cooked in a Fireless Cooker*

Clean and wipe. Put on the stove in the fireless cooker kettle, cover with boiling unsalted water and simmer for from 30 to 45 minutes according to the size of the fowl. Then season, cover closely, and remove to the fireless cooker. If the fowl is tough, it is best to start cooking it in the evening and leave it in the cooker all night. It may be necessary in the morning to bring it to the boil again, and return it to the fireless cooker for several hours more. Never leave food in the fireless cooker after it has grown tepid. It should then be either rapidly cooled, or — if necessary to cook it longer — brought to boiling point again.

*Braised Fowl*

*Braised Fowl* (Maria W. Howard). Wipe, stuff, sew, skewer, and place on rack in kettle with tight-fitting cover.

Place six slices of salt pork on bottom of kettle, add one-quarter cup each, carrot, onion, turnip, and celery, a bit of bay leaf, sprig of parsley, one teaspoon peppercorns, two teaspoons salt, and three cups boiling water.

Cover kettle, and cook in oven three or four hours, always keeping enough water in kettle to prevent vegetables from burning. When fowl is tender, brush over with melted butter, dredge with flour, and brown in oven.

Serve with gravy, and vegetables pressed through sieve.

*Chicken Pie*

Cut a chicken in pieces for serving, cover with boiling water, and simmer till tender. Put chicken in baking-dish and pour over it a sauce made from four tablespoons chicken fat (skimmed from the broth), four tablespoons flour, a little onion, pepper and salt, and enough of the chicken broth so that the chicken will be barely covered. Cover the dish with mashed potato, biscuit dough, or pastry, and bake till the potato is browned or the crust done. Serve at once, or cool quickly and re-heat when it is to be used.

*Left-over Chicken*

*Chicken Aspic.* Besides the familiar forms such as chicken hash, creamed chicken, chicken salad, giblet stew, etc., in which

left-over chicken may be served, we often read of chicken aspic, but set it aside as too difficult because the directions for making it are often complicated. It is really very easily made, and is an especially good hot-weather dish. To make it, boil down good chicken broth until reduced one-half. Season with salt, a pinch of red pepper, celery-salt, onion-salt, and a few drops of lemon-juice. Mix with it bits of cold chicken, green peas, or carrots cut into small pieces. (Not enough to thicken it.) To every quart add two tablespoons (one-half package) of granulated gelatine that has been soaked in a little cold water. Stir over the fire until the gelatine is dissolved, then pour it into cups or moulds to harden. Serve very cold.

*Chicken fat* may be used not only in frying, but is an excellent substitute for butter in cake-making.

#### CARVING A ROAST CHICKEN

Put the chicken on the platter breast up, and with its head toward the carvers left. Put in the fork across the center of the breastbone. Cut off the wing, the leg, and the side-bone between leg and body. To carve the breast-meat, cut slices from the breast-bone to the place from which the wing was cut. Cut from the end of the breast to the left of the wing joint to remove the wish-bone. The fork should not be removed until the carving has been carried to this point. Cut the leg in small portions. Serve the first half of the chicken, then turn the platter around and carve the second half.

## STATISTICS RELATIVE TO POULTRY IN NEW YORK STATE

(Taken from U. S. Census, 1910)

County	No. of Poultry of all kinds	Value
Albany . . . . .	171,339	\$150,429
Allegany . . . . .	187,579	106,543
Broome . . . . .	184,377	128,383
Cattaraugus . . . . .	235,088	142,698
Cayuga . . . . .	360,543	274,673
Chautauqua . . . . .	325,621	227,478
Chemung . . . . .	92,712	67,696
Chenango . . . . .	245,256	172,226
Clinton . . . . .	98,617	61,052
Columbia . . . . .	172,879	134,682
Cortland . . . . .	153,550	106,176
Delaware . . . . .	239,755	161,947
Dutchess . . . . .	236,074	221,957
Erie . . . . .	377,098	309,459
Essex . . . . .	61,169	40,574
Franklin . . . . .	98,495	60,443
Fulton . . . . .	67,193	49,239
Genesee . . . . .	166,902	121,588
Greene . . . . .	124,075	105,243
Hamilton . . . . .	9,884	7,091
Herkimer . . . . .	134,528	89,829
Jefferson . . . . .	230,378	145,889
Kings . . . . .	3,814	2,953
Lewis . . . . .	98,569	54,581
Livingston . . . . .	166,149	109,458
Madison . . . . .	211,716	148,843
Monroe . . . . .	300,139	260,547
Montgomery . . . . .	143,302	102,959
Nassau . . . . .	76,618	64,109
New York . . . . .	2,187	1,876
Niagara . . . . .	261,290	173,021
Oneida . . . . .	276,646	203,490
Onondaga . . . . .	303,764	258,260
Ontario . . . . .	243,068	173,779
Orange . . . . .	249,061	209,660
Orleans . . . . .	134,740	95,279
Oswego . . . . .	251,022	174,806
Otsego . . . . .	303,901	197,795
Putnam . . . . .	50,167	43,265
Queens . . . . .	12,989	9,570
Rensselaer . . . . .	184,489	151,085
Richmond . . . . .	4,781	5,088
Rockland . . . . .	71,792	65,665
St. Lawrence . . . . .	315,991	216,997
Saratoga . . . . .	178,318	146,328

	No. of poultry of all kinds	Value
.....	62,771	50,484
.....	191,463	127,364
.....	88,114	57,385
.....	128,791	92,957
.....	296,172	183,907
.....	305,844	216,276
.....	200,742	173,691
.....	158,031	110,638
.....	183,706	124,017
.....	265,195	231,448
.....	48,354	32,993
.....	167,477	168,347
.....	343,400	238,354
.....	138,296	139,921
.....	158,211	94,599
.....	125,644	82,298
.....	<u>10,678,836</u>	<u>7,879,388</u>



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**RAYMOND A. PEARSON**, Commissioner of Agriculture, State of New  
1907-1912; President, Iowa State College of Agriculture and M  
Arts, Ames, Iowa, 1912—.



STATE OF NEW YORK  
DEPARTMENT OF AGRICULTURE

CALVIN J. HUSON, Commissioner

Bulletin 66

Agricultural Organizations

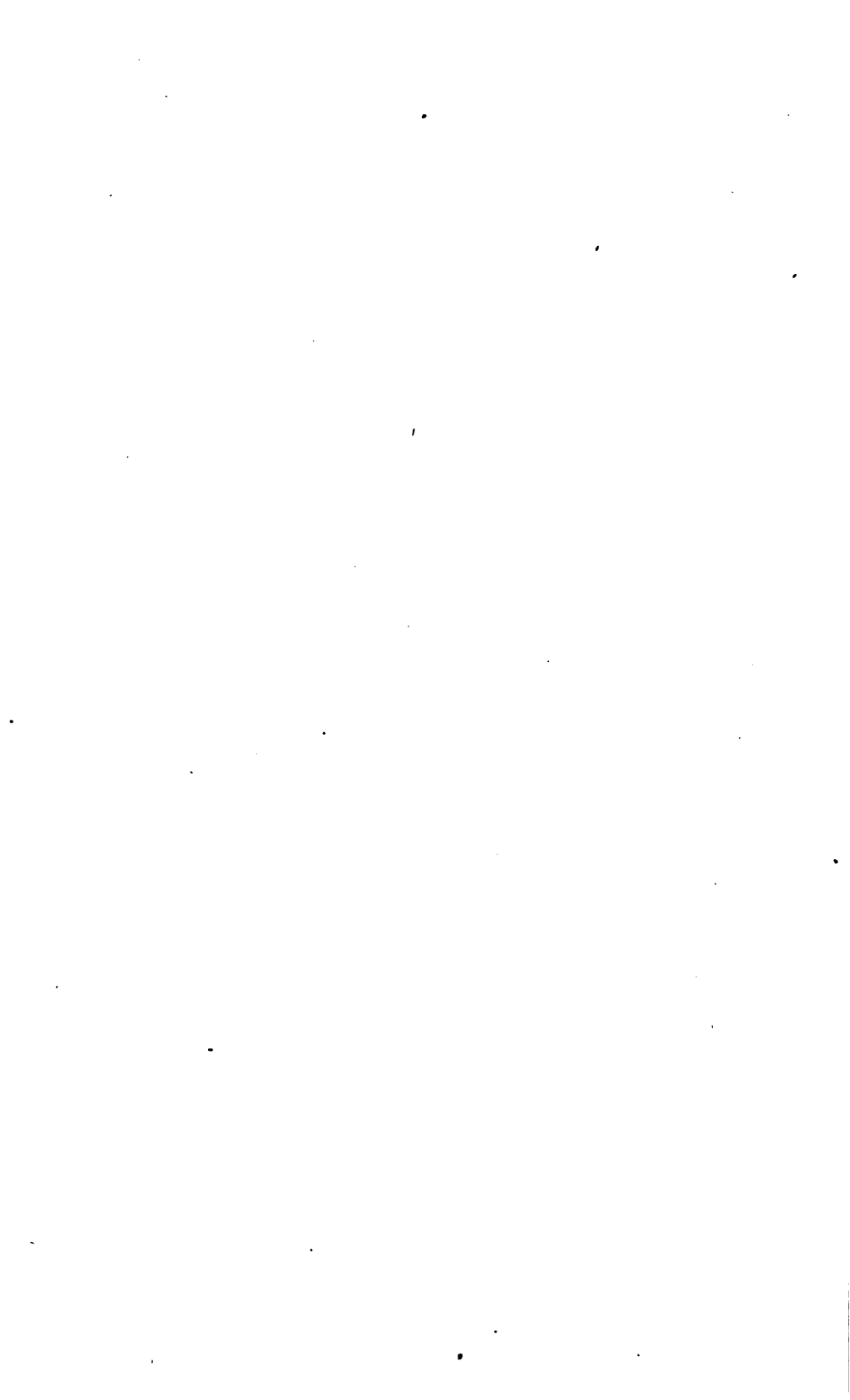
IN

European Countries

BY

RAYMOND A. PEARSON

ALBANY  
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1914



## FOREWORD

At the time of the retirement of Honorable R. A. Pearson as Commissioner of Agriculture on February 7, 1912, he was commissioned by me, at the request of Governor John A. Dix, to visit Europe, that he might study agricultural conditions there, particularly as to local cooperation in buying and selling, and report as to his findings on his return. His previous connection with the Federal Department of Agriculture and Cornell University, and his nearly four years as Commissioner of Agriculture of the State of New York eminently fitted him for this task. Consequently, in the following April, Dr. Pearson undertook the commission, visiting the British Isles and the best agricultural sections of Continental Europe, remaining abroad for four months.

Dr. Pearson's complete manuscript containing his report was received by me in June, 1914. It covers his observations in 1912 and data collected in 1913 and 1914, which brings the most of the text up to the close of the year 1913, and amply justifies the expenditure on the part of the State in sending Dr. Pearson abroad.

Having issued in the previous February, as Bulletin 56, a report of a Commission which had made a somewhat similar investigation later, and promised reports and bulletins being all scheduled for the next five months, this report could not be issued until this time—which would seem particularly opportune in view of the interest now being manifested in the subject.

CALVIN J. HUSON,  
*Commissioner of Agriculture.*

AMES, IOWA, *June 15, 1914.*

HON. CALVIN J. HUSON, *Commissioner of Agriculture, Albany,*  
N. Y.:

DEAR SIR.—I have the honor to transmit herewith a report upon agricultural organizations in European countries, being based primarily upon personal observations made under your direction in the summer of 1912 and including also information collected since that time.

I hope this material will have special interest and be of much value to the many farmers and friends of farmers in New York who are now becoming deeply interested in the subject of more efficient farmers' organizations.

Very respectfully yours,

RAYMOND A. PEARSON.

## PREFACE

Investigation which led to the report here presented was undertaken by the New York State Agricultural Society about two years ago. It was further advocated by Governor John A. King. The investigation was undertaken at the instigation of the Governor and the State Commissioner of Agriculture, Mr. Calvin J. Huson. Various countries in Europe were visited by the writer and in many of them some one or more phases of agricultural organization were outstanding in point of interest. The countries visited, in their order, were Spain, Italy, Austria-Hungary, Russia, Denmark, Norway, Sweden, Switzerland, France, Belgium, England, Scotland and Ireland. Agricultural organizations are doing effective work in Finland, Roumania, Bulgaria, which countries were not visited. Japan, according to reports, is making rapid progress now in such work as buying over 7,000 buying, selling and banking cooperatives.

In the following pages effort has been made to report facts about agricultural organizations in European countries which are of interest to farmers in New York. Effort has been made to report developments which seem most important to farmers in foreign countries alone nor to give details of laws and various public documents — notably the report of the United States and United States Commissions published as a United States document. Often the phases of development in foreign countries which are of chief interest in those countries are of no concern to us, because of different fundamental economic conditions of living and because of different legal laws. The main facts of interest to American farmers are the statements of what the organizations are doing in foreign countries, why they are doing these things and what their results are. With such information clearly in mind it will be easier for farmers and legislators in this country to decide upon incorporating in workable form all that is desirable.

Acknowledgments are due to many persons. Letters of introduction and commendation were furnished by the United States Department of State and officials of the Federal Department of Agriculture and by many friends in United States and Canada who have visited foreign countries. In every country visited official and personal courtesies were received. It would be impossible to mention all who should be mentioned in this connection, but the writer wishes especially to extend thanks to United States diplomatic and consular officers and to the following:

In Austria — Prof. Fritz Neithammer, Technical High School. Brünn; Dr. Adolf Ostermayer, Secretary, German Agricultural Society for Moravia, Brünn; Mr. O. B. Neumark, Brünn; Hon. Siegfried Strakosch, Vienna; Prof. Joseph Hausler, Secretary Imperial Royal Agricultural Society, Vienna.

In Belgium — Mr. Paul de Vuyst, Director General, Ministry of Agriculture, Brussels; Prof. Fratern, Zootechnics Department, University of Louvain, Louvain; P. Wauters, Bouchout.

In Denmark — Hon. Knud Valloe, Deputy Minister of Agriculture, Copenhagen; Prof. Dr. Bernard Bang, Royal Veterinary and Agricultural High School, Copenhagen; Mr. Peter Aug. Mórkeberg, Live Stock Commissioner, Copenhagen; Mr. N. O. Hofman-Bang, Director, Agricultural Experiment Station, Copenhagen; Mr. J. H. Monrad, Naerum; Hon. M. P. Blem, Director of Credit Society, Copenhagen; Mr. Rudolph Schau, Department of Agriculture, Copenhagen; Dr. G. V. Ellbrecht, Dairy Commissioner, Royal Agricultural Society of Denmark, Copenhagen; Dr. Harold Mórkeberg, Veterinary Inspector. Copenhagen; Mr. George Hófler, Haslev.

In England — Prof. T. H. Middleton, Intelligence Division, Department of Agriculture, London; Mr. Alfred Wood, Assistant Secretary, Agricultural Organization Society, London.

In France — Hon. Alfred Gentils, Deputy Chief of the Agricultural Credit Service of the Ministry of Agriculture, Paris; Hon. André Courtin, President, Society of Farmers of France, Paris; Hon. Henry Sagnier, Editor of Journal of Practical Agriculture, Paris.

In Germany — Prof. Dr. Robert Ostertag, Geheimer Regierungsrat, Berlin; Captain Rittmeister von Kiesenvetter, Director of the League of Farmers, Berlin; Prof. Heinrich Dade, Secretary of the Agricultural Chamber, Berlin; Dr. Rabe, Director of the Agricultural Chamber, Halle; Dr. Phil. A. Alves, German Agricultural Society, Berlin; Mr. Heinrich Eckstein, Cashier, Co-operative Savings Bank, Griessheim; Prof. R. von Rümker, University of Breslau, Breslau; Dr. Phil. Paul Hillman, Seed Expert, German Agricultural Society, Berlin; Hofrat Bach, Dresden; General Secretary Haas, Darmstadt.

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In Italy — Hon. David Lubin, United States Delegate to the International Institute of Agriculture at Rome; Marcus Rafael Cappelli, President of the International Institute of Agriculture, Rome; Dr. A. Hermes, Secretary of the International Institute of Agriculture, Rome; Dr. Leo D. Gabrici, Expert, International Institute of Agriculture, Rome; Prof. Italo Giglioli, University of Piza, Piza.

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In Scotland — The Assistant Secretary of the Scottish Agricultural Organization Society.

In Spain — The Viscount of Eza, President of the General Agricultural Society, Madrid; The Marquis of Frontera, Secretary of the Live Stock Association, Madrid.

In Sweden — Mr. G. Leufvén, Secretary of the National Union of Agricultural Cooperative Societies, Malmö; Prof. Weibull, Director of the Alnarp Agricultural Institute, Alnarp; Mr. Carl G. Dahl, Horticultural School of the Alnarp Agricultural Institute, Alnarp.

In Switzerland — Prof. Dr. E. Laur, Secretary, Swiss Peasants' Union, Brougg; Mr. Karl Wunderli, Secretary, East Swiss Union of Agricultural Cooperative Societies, Winterthur; J. T. Schräml-Steinman, East Swiss Union of Agricultural Cooperative Societies, Winterthur; Mr. C. Baer, Union of Swiss Cheese and Milk Cooperative Societies, Winterthur.

RAYMOND A. PEARSON

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## INTRODUCTION

tural organizations represent one of the latest and movements in the field of agriculture. Years ago this got under way in European countries and now, when to be making a good start in the United States, it has high degree of development in the foreign countries started.

and do learn much from the experiences of others. The greatest advances in American agriculture have been from examples found abroad. Agricultural schools and experiment stations were started in this country after many of the most costly problems in connection with such institutions had been worked out in England, Germany and elsewhere. Methods of breeding, underdrainage, the use of fertilizers and other technical questions, have been developed in this country with lessons learned from experiences in other countries.

In making a study of agricultural organizations of a foreign country for the benefit of farmers in the United States, three things are necessary in order to get the fullest possible benefit:

First. Facts should be secured concerning the work of the organizations, and concerning agricultural conditions and methods of practice. Such a study shows what the problems are in the country visited and how they are being met.

Second. There should be a careful interpretation of these facts.

Frequently it will be discovered that certain conditions are dependent upon others that are entirely wanting in another place. Travelers in foreign countries are too apt to recommend the literal adoption of practices which they find; but such adoption would lead to disaster, because the practice depends upon conditions of only local importance.

Third. The emphasis at home of principles which are applicable to American conditions, or suggestive of improvement.

In the following pages chief effort is made to tell some of the outstanding things being done by European farmers in

organization. There is no attempt to make an exhaustive statement concerning agricultural organizations in any country. The average time spent in a country was less than one week, which was only enough time to observe items of most conspicuous importance. Foreign terms have been omitted from the text, and values of weights, measures and moneys have been changed to corresponding American terms. In making these changes round numbers are generally used. Care has been taken to avoid any inaccurate statements, yet it is realized that some errors might have crept in. It would be easy for this to happen when interviews have to be brief and must take place with the aid of interpreters who are not familiar with the subject under discussion.

One of the chief lessons to be learned by a study of cooperation in European countries is that the success of these efforts is in proportion to the need of them, as well as the efficiency with which they are carried on. In the United States many people would think cooperation is needed like that followed in Europe. This is not necessarily the case. If retail merchants are compelling payment of unreasonable prices and thus enjoying exorbitant profits, there is reason enough for farmers to cooperate in the purchase of their supplies, and such cooperation may be made successful. Though the need for such cooperation is not universal in this country it was very urgent in many sections of Europe and this accounts for the large number of successful cooperative buying societies there. It must be freely admitted that many retail merchants in America are conducting their business on as low a margin as could be accomplished by cooperation and in such cases cooperation in buying is not needed. Those who want to cooperate should first consider where is the unfairness that needs to be remedied; and next, whether this unfairness can be corrected best by cooperation. If the need of cooperation is genuine and fairly presented, and if the matter is in the hands of reliable and competent persons, there need be no great difficulty in cooperating.

American farmers may find themselves handicapped by the lack of or by hostile legislation. For example, the labels of cooperative societies in this country are not protected as they should be to command respect of outsiders and prove useful to those who use them. In such cases cooperation needs to begin a step further

those interested should unite in a campaign of education  
view of having the law changed.

Cooperative societies have not been developed without hard  
experience in European countries shows that at first there  
was a natural reluctance of farmers to come together  
and confidence in one another. Some times the cooperative  
has been stubbornly opposed by interests which believed they  
were hurt from the movement. Cases are on record where  
middlemen who charged exorbitant prices and who carried accounts  
for farmers have threatened to take stern measures for immediate  
action if the farmers attended or otherwise showed their  
interest in meetings where the advantages of cooperative buying  
were discussed. Selfish interests have attacked men of the  
highest character through innuendo and false charges, because  
they were promoting the idea of cooperation.

The continuation of the work of cooperative societies and inter-  
ference by persons most prominently connected with them shows  
that this is being made constantly to prove by reasoning and by  
fact that cooperative buying or selling by farmers is not  
opposed to legitimate business interests, but no effort is made  
to deny the fact that these societies are distinctly injurious to  
business interests which thrive on unreasonable profits. Instances  
are given where groups of farmers, no longer willing to submit to  
middleman charges for goods which were too often low in quality,  
obtained their orders and secured bids and thus they have  
secured a reduction of 25 to 50 per cent. from the prices formerly  
paid for fertilizer or machinery, or whatever articles are required.  
George Plunkett, the great leader in agricultural coopera-  
tion in Ireland and a pioneer in the movement as a whole, points  
out that experience confirms the opinion that even in the poorest  
country there is a perfectly safe basis of security in the  
local industry of the residents. This security is not avail-  
able through the ordinary commercial channels, but it is available  
when furnished through the local organization under  
conditions that commonly obtain.

The Ohio Agricultural Society emphasizes the principle which  
is the basis of successful cooperation; namely, the importance of put-  
ting responsibility directly upon the individuals who compose

the society. This insures the personal interest and activity which are necessary to success. Any efforts made by the nation or state to assist in cooperation must carefully avoid the removal of this important personal incentive.

It would be a wise expenditure of funds for our government, or any state with large agricultural interests, to provide for experts to visit different places in Europe to make exhaustive studies of agricultural conditions and methods. Other governments make such studies and profit from them, which, undoubtedly, is one reason why their systems of agriculture are found to be superior in some respects to our own. The British government maintained an agricultural investigator in Germany for nearly two years. The German government now sends official investigators to various countries. Experts from foreign countries are frequently seen traveling about our own country securing such ideas as they think may be of interest and value at their homes. Even Norway with its little fringe of good agricultural land, the total value of which is very small as compared with agricultural values in New York State, makes a regular practice of sending out experts to learn what is being done in agricultural improvement in other countries that might be helpful to them. Such trips will be called "junkets" by some who are not familiar with the difficulties and hard work encountered and the value of information to be secured by one who is capable of getting it, but such trips should be made often by persons representing this government. Many an administrative and scientific agricultural official would become more efficient and enthusiastic, and his work of greater benefit to the public, if he could see for himself improvements being made in other countries,—for example, how the crop yields are being increased far beyond what is seen in this country.

The suggestion has been made and is worthy of careful consideration, that a portion of our diplomatic and consular representatives should be selected with a view to their agricultural training and appreciation of the needs of American farmers, so that these men might assist in selecting from the wealth of experience of other countries items which would be of the highest value in different parts of our own country.

Among the subjects of importance that should be studied by representatives visiting foreign countries are the following:

**Small holdings.** These are small farms occupied by families who do all their own work and often work part time others. They are being encouraged by law with the view of helping worthy people to own their own homes and to live in sections of the country where their services may be of greatest value to themselves and to the public.

**Seed selection.** Great improvement must be made in our country by adopting ideas which have been well worked out in Germany and elsewhere for increasing crops through the use of better seeds.

**Breeding of livestock.** It would be impossible to estimate the unnecessary losses that are occurring in our country on account of the failure to adopt simple measures of improvement which are suggested by the practices in France, Denmark, England and elsewhere.

The American Association of Agricultural Colleges and Experiment Stations has recognized the importance of studies abroad, as indicated above and has recommended that the Federal Government provide for some such studies, by the unanimous adoption of the following resolution:

**WHEREAS:** Certain superior methods obtain in agricultural practice in European countries, and it is desirable that these methods be better known in this country, and

**WHEREAS:** The most satisfactory way of securing reliable information of this character would be through experts detailed in this country, temporarily detailed for study along specified lines in foreign countries — as is a common practice of European governments, they sending official representatives to other countries, including the United States, for the purpose of securing agricultural information, and

**WHEREAS:** This country has established no system of permanent agricultural representatives in foreign countries — although such representatives are maintained by certain other countries, and

**WHEREAS:** Members of the staffs of our agricultural colleges and experiment stations and experts in the Federal Department of Agriculture are well trained for making such

observations and reporting on them in a manner to greatest value to the practical farmers of this country

WHEREAS: Agricultural teachers and investigators sionally are available for temporary service of the character herein indicated, and

WHEREAS: Such service should be highly valuable to agricultural interests of this country,

THEREFORE, BE IT RESOLVED: That this Association, through a committee, seek the cooperation of the Honorable Secretary of Agriculture, and take such steps as are practicable to bring about the appointment annually of a limited number of persons who are on the staffs of land-grant colleges and experiment stations or employed in the Federal Department of Agriculture, to investigate and report on certain subjects to be designated in connection with agriculture and rural life of foreign countries. Such persons should be recommended to the Secretary of Agriculture by this Association as well qualified to investigate the subjects proposed to be assigned and they should be appointed on their work outlined by the Secretary of Agriculture and their reports should be made to that official for publication. Persons having such appointments should be given leave of absence by their respective institutions and they should receive expenses from the Federal Government and reasonable compensation in addition to sabbatical or other allowances, any, and they should be given such official recognition through American embassies or the consular service as may be arranged by the Secretary of State.

## I AUSTRIA-HUNGARY

### AUSTRIA

farmers in Austria are said to be more prosperous now than were a few years ago. They are receiving better prices for cattle, and other products and by means of better methods of production and effective systems of cooperation, their expenses are being lowered. Cooperative societies have played a very important part in making this change. Formerly farmers were the mercy of usurers and dealers. They were compelled to pay outrageous rates for loans and unreasonably high prices for seed and supplies. In a very large measure their organizations have served to overcome these great obstacles. One authority was asked if the cooperative societies would be necessary if farmers and merchants were fair and honest and if there were free competition. He replied that he thought they would be necessary even then, because the societies do their business in such large volume that they get better prices than merchants can secure and they hold down expenses better than merchants would. They do not carry large stocks of goods. It was pointed out that merchants are not experts on all the different lines of goods they carry and the agricultural organizations have explored the different important features of their work. Members of the society feel that they can trust the advice of officers of their own agricultural societies in reference to, for example, the purchase of machinery they should buy; and they are likely to be suspicious that a dealer would be inclined to recommend his own style whether it was the very best or not. An especial need for a cooperative organization in Austria is due to the fact that the government does not make inspections for animal and plant diseases and for adulterated fertilizers and feeding stuffs, as is done in the United States, and the farmers have been obliged to protect themselves in these respects.

By the passage of laws and by appropriations, the governments of the entire country and the provinces have shown their appreciation of the importance of a prosperous agriculture. A great handicap to development in education is due to the

many languages which are prevalent in Austria. There are less than six important languages, and little, if any, effort is made to bring about a common language. This results in duplication of schools and unavoidable increase of cost. There is an agricultural college for German speaking people, one for Poles and one for Slavs, all maintained by the national government. Some of the professors teaching in them are engaged in outside work, where they are known as agricultural counsellors. There are academies maintained by the provinces, again serving as institutions for Germans, Poles and Bohemians. There are first grade or "middle" agricultural schools, supported partly by the national and partly by the provincial governments. Eighty of these are in operation and distributed among the people using four languages — German, Bohemian, Polish and Slavic. In other similar schools are conducted in the interest of fruit growing, gardening and forestry. There are lower grade schools known as agricultural schools, giving one-year courses which are open to students who have reached a certain standard in the public schools. Forty-two of these institutions are in Austria and are supported by the provincial governments. This group of schools has about 1,000 pupils. The curriculum includes religion, language, mathematics, geography, botany, physiology, and chemistry, besides agriculture. There are about 150 agricultural winter schools intended for the sons of small farmers. These are supported in part by the provincial governments and in part by agricultural societies. There are also special courses given in dairying and housekeeping for the daughters of small farmers. These courses last from three months to a year. A middle school averages about 75 students. Many of the teachers of these schools serve as traveling instructors in summer schools.

The Austrian government assists agricultural organizations of individual farmers. It was pointed out that this is done not because of the farmers' welfare but in the interest of consumers generally. It is the purpose of the government to bring about a larger production of food products and thus more favorable prices. In Austria it was emphasized that government aid to agriculture is not for the farmer but for the public. It is recognized that many of the difficulties confronting farmers cannot be combated by farmers individually.

The government assists selected farmers in making improvements on their farms. For example, barley is a very important crop in the province of Moravia; the federal and provincial governments furnish funds for the purchase of good barley seed, which is sold to farmers at the same rate as they receive for their crops. Again, about \$14,000 is appropriated to encourage the use of superior bulls. A farmer's society arranges for a market place where bulls may be sold. Representatives of village and town bull societies select the animals of their choice and the government pays as high as one-half of the purchase price; but this is on condition that the bull is approved by an inspector of an organization of farmers which is closely associated with the government department, that it has passed a tuberculin test, that it will be kept at least two years and that when sold the receipts will go toward the purchase of another one on the same conditions. These regulations appeal the more strongly because there is a legal requirement that in each town there shall be at least one approved bull for a given number of cows. The municipality is held responsible for carrying out this law, but usually it is relieved of its responsibility by the volunteer action of farmers' societies. A private farmer wishing to use a bull in his own herd only is not subject to the requirements. Villages provide, by a small tax on cows, for the care of a bull whose service is free.

The government is greatly interested in the suppression of bovine tuberculosis. About twelve years ago 20,000 cattle in Moravia were tested with tuberculin and about ten per cent. reacted. When a farmer thinks the disease may be in his herd he may write to the official agricultural association and a test by a government veterinarian will be arranged. This is free, and believed to be reliable. All reacting animals are given a permanent tattoo mark in the right ear, which lasts at least five years. It is applied regardless of the physical appearance of the animal and of course it continues regardless of the result of any subsequent test. It was adopted as a means to help in stopping the sale of reacting animals as healthy ones. The sale of these well-marked reactors is not restricted by law and fortunately butchers are not prejudiced against them. As a veterinary inspection prevails at slaughterhouses it is known by the public that the

meat of these animals will not be used unless it is safe. The government does not pay for tuberculous animals. The Bang system is being practiced to a limited extent in herds that are badly infected. In such cases all the milk is pasteurized and great care is taken to keep the old herd apart from its own offspring and any animals newly acquired that are free from the disease.

The government assists agricultural organizations in some instances by giving them appropriations, but more often by paying for certain kinds of work authorized by the government and done through the society. It is said that the government provides about \$14,000 a year toward the expenses of a central buying and selling society. In the case of another society, a large appropriation is given for development work on farms.

Slowly in recent years provincial agricultural societies have been changed from entirely private affairs to official agricultural boards, and the names have been changed to agricultural advisory boards. These are the organizations, chiefly, which expend government funds for agriculture. These societies or boards consider various propositions in the interest of agricultural development and come to the government with recommendations for expenditures of funds for the work which seems most promising. When the government's help goes so far as to put up a dairy building for a cooperative creamery, or to pay perhaps twenty per cent. of its cost, the expenditure is likely to be justified in parliament by an argument that the ranks of the peasant farmers must be maintained.

About fifty per cent. of the population of the country lives directly from agriculture. The Austrian peasant farmer is regarded as conservative and hardworking—a good citizen, and the chief source of recruits for the military service.

National and provincial governments are furnishing considerable financial assistance to farmers in the matter of better pastures. The national government has provided for this purpose \$1,000,000 a year for twelve years. This money is distributed among the different provinces according to their number of cattle; for example, the province of Moravia receives about \$80,000. It adds about \$20,000 to this amount itself. Many farmers apply

for this government help and a few are selected at favorable points so that the improvements on their farms may serve as examples to the neighborhood. In making the selection the quality of the land receives less attention than its location. It is required that all the land selected for pasture improvement on any farm shall be in one piece and lie near the house. From the government fund there is furnished fertilizer worth about \$28 an acre. The fertilizer consists of Thomas slag, kainit, Chili saltpeter and lime. Farmers must pay about \$4 an acre toward the cost of this fertilizer and do all the work as prescribed by the traveling instructor. About one hundred farmers in the province have recognized the advantages to be derived from following the advice of the instructors and are now attempting to conduct their farms entirely subject to their supervision and advice.

The systems of cooperative organization found in Austria are quite similar to those found in Germany, and have grown at about the same rate. There are cooperative mortgage societies for making loans on real estate, some of these being nearly fifty years old. The bulk of their business is done in the interest of farmers. As in Germany, the great advantages of loans from these institutions is in their fixed rate of interest, the amortization feature, the fact that they are non-profit sharing, and that redemption may not be required at any time. There are more than \$200,000,000 on mortgage loans made by these societies. The smaller credit institutions of the Raffeisen type have been developed chiefly in the last twenty-five years, until now there are more than 8,000 of them having about 1,000,000 members and transacting business amounting to nearly \$4,000,000 yearly. Cooperative societies for buying and selling products are found in many places. Dairy societies for disposing of milk, and buying societies appeared to be the most common; but there are many societies for selling eggs and live stock, the storage of grain, and for other purposes.

#### THE IMPERIAL ROYAL AGRICULTURAL SOCIETY OF VIENNA

This society has headquarters in its own building, which is a large, permanent structure situated near the royal palace in Vienna. It is known as The Vienna Association, or The Society of Vienna. It is an association of the province of Lower Austria

and is made up of representatives of associations in six judicial districts. It is an old organization, and as long as a hundred years ago was engaged in sending out "wandering instructors" to give technical advice to the members, who were large land owners.

Each district has its own association, which is made up of representatives of local village clubs. The sixty-one district associations are formed by representatives of 840 of these clubs, having a membership of more than 125,000. The Vienna Association also includes some members living in other provinces of the monarchy. In this respect it is characteristic of many agricultural organizations which are organized especially to serve a district, but which will receive into membership a small number of persons living elsewhere. The Vienna Association is strongly influential. It is now seeking to form an alliance with corresponding associations of fifteen other provinces for the purpose of securing greater advantages in the purchase of supplies and the conduct of the work of these societies.

The affairs of the Vienna Association are managed in part by the secretary. The highest authority comes at the annual meeting of the members, at which executives are elected who are held for the conduct of their work. Several sections, each having their own committees of management, have been established to give attention to special subjects. The subjects of the different sections are:

1. National economy.—Consisting of legislation matters, the consideration of the tariff, and such affairs.

2. Economies of the farm. This section studies profits and losses and methods for increasing profits. Typical estates and farms in different parts of the country submit weekly statements of business transactions and from these statements business accounts of the farms are kept in the office of the section. It is proposed in this way to develop and teach a system of bookkeeping that can be universally adopted. Already comparisons can be made from records in hand which are of great value. Special effort is being made to get the cost of production on as exact a basis as possible. Between four and five thousand estates and farms are now under observation in this

AUSTRIA



67. DIRECTORS' ROOM, COOPERATIVE AGRICULTURAL SOCIETY, VIENNA



168. GENERAL MEETING ROOM, COOPERATIVE AGRICULTURAL SOCIETY,  
VIENNA



**AUSTRIA**



**G. 169. COOPERATIVE AGRICULTURAL SOCIETY HEADQUARTERS,  
BRÜNN**



**D. MONUMENT OF FOUNDER, COOPERATIVE AGRICULTURAL SOCIETY,  
BRÜNN**



tion and detailed accounts in the society's office are being kept for one hundred farms.

3. Seed and plant testing. Efforts are being made to find the plants that are best adapted to local climatic and soil conditions throughout the country. Some financial help for this work is received from the government.

4. Dairying. Special attention is being given to the improvement of meadows, over 30,000 circulars on this subject having been distributed. Much attention is given to milk prices. Formerly milk was sold without profit at about three cents a quart. The society secured a list of producers, who were brought together and were glad to let the society make the terms of sale of their milk for them. A substantial raise of price was secured and a most important change for the producers was made by fixing the date for future contracts in September when milk is scarce, instead of in June or July when milk is plentiful. The producers appreciated the advantage secured for them by the society and they are reasonably careful to make reports upon the status of their business. The contract calls for a minimum of three and three-tenths per cent. fat in the milk and does not allow a bonus for extra richness. Two dairy instructors are employed and the milk of the best dairies is given a special label to designate that it is most suitable for children.

5. Live stock matters, including the improvement of all kinds of live stock, poultry and fish.

6. Buying and selling. A paper is published weekly and members are given correct information concerning prices. Machinery and supplies are purchased for both members and non-members. A sub-committee is organized to make sales for members having small farms and this work is being extended. It is conducted under a special clause of the law which permits groups of persons to buy or sell. A factory is operated for grinding cattle feed, and it is proposed to undertake the preparation of commercial fertilizers. Samples of cattle feed are sent out to members by parcel post and a convenient system of collection exists in connection with freight service so that payment for shipment will be made on delivery.

7. Farm labor. Considerable work is done to assist in the equitable distribution of farm labor. For example, there is at times a surplus in one part of the country and a shortage elsewhere, and this section takes measures to adjust the labor to the requirements.

8. Agricultural exhibitions. These are conducted in cooperation with other interests and may be either general or special. The former include exhibits of various kinds. The latter is a show in the interest of one product only, such as hops, wheat, barley or cattle. A barley exhibition was held in Vienna in 1911. It is customary for the exhibition to visit different places in different years. The cost of conducting them is paid by the state, the society, and from admission fees and charges for exhibit space. The exhibits are examined with great thoroughness. Barley is judged by appearance and composition and credit is given for the yield per acre. A scale of points is used and prizes are awarded both by the government and the society. At a recent barley show there were about 2,000 samples exhibited, arranged according to provinces and contained in boxes covered by glass. Details were stated on a card attached to the exhibit and samples of plants were shown. The jury of awards included fifty men who came to the show at their own expense from all parts of the country. Exhibits of special merit were recognized by medals from the emperor. Letters were sent to exhibitors to explain to them wherein they could make improvements. A bulletin on barley growing has been widely distributed.

There are employed at the headquarters of the Vienna Association about forty persons, chiefly engaged in clerical work. State aid is not received for this help, but the society handles certain grants made by the government for special purposes such as the labor bureau work and the special shows conducted in the interest of barley. Funds of the society are raised by its members, who now number 1,800 and pay from \$400 to \$30 each a year. The expenses of maintaining headquarters amount to about \$20,000 annually.

A comprehensive program has been worked out for the establishment of an Austrian imperial agricultural bank which would

departments, interested in loans on personal property estate; buying and selling; building of factories for s, power houses, etc.; assisting farmers needing tem- id; handling deposits subject to check.

proposed that anyone doing business with this bank may ote in naming the committee of management, which will wenty-four members so selected and twelve appointed by nment.

### THE AUSTRIAN LOCAL SOCIETIES

small Austrian farmers belong to two local societies. these organizations is commonly called a "Casino." pay sixty cents a year as dues and receive a paper twice nth. The organization does not conduct a business, but in educational and political efforts. The casino is the village. (Most Austrian farmers live in villages). Sev-aboring casinos combine into a district society and these in bine into a provincial society, which receives large land as individual members. The last named include some elegated by the government. They assist in carrying for-elopmental work supported by the government, such as ovement of pastures and the introduction of better in cattle raising. This society proposes a plan of work overnment, and, if approved, money is supplied, and the with this aid, carries on the operations. Practically all rnment money for promoting agriculture goes through in this manner. If a question arises as to the best pro- he government is likely to refer it to the provincial so- advice.

of the routine work of the district organization is trans- the president and secretary, but important matters are to a committee of eighteen which meets four times a his committee represents the various affiliated district and contains one member representing the government representing the province. This committee elects the The president receives about \$400 a year for expenses; tary receives a salary.

It is these provincial societies which have been taking on more and more the character of advisers of the government and are now sometimes called agricultural advisory boards, referred to elsewhere. Even in provinces where the society has not yet assumed the official form of organization, it is often entrusted to supervise agricultural development work which is done for the government and in the name of the minister of agriculture. In some provinces, again, the old provincial society continues in operation and a new official board has been created. In such cases the two generally work in harmony, the latter being the more active, however. In the province of Moravia the same person is secretary of each organization.

When there are two organizations such as this, the official one is likely to be the more active, but some functions are delegated by it to the other. For example, in one section, the official board delegated the unofficial society to do all the work for the betterment of crops which was supported by government funds. Expert advisers were sent out, botanical work conducted on a considerable scale, pedigrees of plants were recorded, fields were examined, and considerable scientific work accomplished. Educational meetings of great value are held by the provincial societies. The last such meeting, held in Brünn, continued four days and was attended by about 1,000 farmers, from the smallest landholder or peasant to the largest. Different sessions were devoted to different questions, such as financial and political questions with special reference to the tariff, seed improvement, plowing, tillage, use of fertilizers, and farm bookkeeping. In connection with the last subject, balance sheets of one farm were used and thoroughly gone over with valuable lessons emphasized.

Strictly social matters do not receive attention from agricultural societies. There are no secret organizations.

The second organization to which the farmer may belong is engaged in business operations. It is commonly called a "Syndicate," and there is one in almost every village, with an average membership of perhaps fifty, each of these syndicates being themselves members in a large group. A member of a syndicate pays \$2.50 to become a shareholder and assumes unlimited liability.

On his payment he is expected to receive four per cent. interest. Experience shows that these investments thus made are safe. The farmers constituting the society live near together and know each other well. Each one knows the business of the others. No new member is admitted except by vote, and one suspected of being dishonest is carefully excluded. Through these syndicates or societies, purchases of supplies are made.

Farmers may belong also to the local bank, which is usually of the Raiffeisen type and has an average of about one hundred members. Deposits are received from members and non-members and loans are made to members at five per cent. interest or less. Usually there is one bank in every two or three villages. Its affairs are managed by a committee which elects the president, who serves without pay, and the secretary, who receives nominal pay. Some of these banks do commercial work also and purchase implements, fertilizers and seeds for members. These banks are favored by the government in being exempt from the government trade tax. On account of this favor they are limited in their business operations to their own members. The small banks are bound into larger ones, and these in turn into still larger ones, so that surplus funds in one part of the country through these channels may easily be made available in another part where most needed. The provincial banks are strong institutions and employ experts in their work the same as any strong bank would do. Some of these provincial banks are giving a good deal of attention to the problem of selling farmers' products. This feature of their work has been developing during the past ten or fifteen years. In carrying out these outside functions, much is accomplished through special organizations which are closely affiliated. Thus these banks have close relations to the second group of societies referred to above. A reason why the bank does not directly enter the commercial business is on account of the unlimited risk which their members carry. Risk is limited in the larger and more active commercial affiliated societies.

## THE CENTRAL FARMERS' UNION OF AUSTRIA

This is a central organization which has affiliated with it provincial and district organizations and they in turn have affiliated with them about 10,000 local societies averaging about one hundred members each. Thus this central union represents one million families or five million people. About 8,000 local societies make financial loans to their members. Although the great bulk of the membership is composed of small farmers, the board of management of the central union is made up principally of owners of large estates and lawyers who are in sympathy with agricultural people of all degrees.

An interesting function of this central union and one of its activities which makes its existence necessary, is its railroad bureau. This office examines for members of the societies freight receipts and makes claims for overcharges, the practice of which appears to be very common, although the railroads are owned by the government. The office receives a small percentage of the collections and thus it is self-supporting. It is said that three out of eight railroad freight receipts need revision. There are various private concerns handling these claims which pay for their services twenty per cent. of what is collected from the railroads. Large business concerns have their receipts examined over regularly.

Another office gives special attention to cooperative dairies which is being developed. Another branch pays attention to agricultural credit societies and those engaged in buying and selling. This central union does not itself buy and sell but assists the smaller organizations by giving advice. Thirty per cent. of the cooperating provincial societies are buying for members.

A provincial society headquarters was visited in Brünn, where a permanent substantial building is occupied. It contains well-furnished offices, store rooms for machinery and feed, an elevator, and, on the top floor, a small dormitory which is now occupied by members of the board who have to remain overnight in the city. The board meets at frequent intervals and happens to be in session at the time of the visit. It was pleasing to note the large attendance, the interest taken, the evidence of ability

conduct affairs of such importance, and to learn that those in actual charge are also actually engaged in farming. This society directs the work of inspectors who visit smaller societies to ascertain if their business is being properly conducted. The government assists in this work by paying in part at least for the service of the inspectors. In the yard adjacent to the building there is a statue of the founder of the society. Members of the managing committee who were showing the writer about pointed out the statue and referred with kindly feeling and much earnestness to the great benefits following the work of the founder.

#### HUNGARY

It is said that the government gives to agricultural interests more in this country than in Austria in proportion to the interests served, the money being spent in much the same way. Agricultural organizations are abundant and they are closely associated with government offices. The brief time spent in Hungary was sufficient to personally see some of the very superior equipment and work of agricultural institutions devoted to experimental work and education and to become convinced that strenuous efforts are being made both by the government and the people to promote the interests of agriculture largely through organizations.

## II BELGIUM

It is said that about half of the farmers of Belgium belong to farmers' societies, and many farmers belong to two or more.

There is a group of societies called official, which receive funds from the government. These are scattered over the entire country, existing in every small district. Several of these societies in neighboring villages affiliate and, by delegates, form societies for provinces. A chief purpose of these organizations is to hold exhibitions or fairs and to conduct educational work, chiefly through lectures, which are given largely in night school buildings.

A society operating in the Brussels district or canton conducts one section which has to do with workmen in general, and another section which has to do with farmers. The latter section has about 3,500 members. It is not cooperative. Its membership fee is about twenty cents for one person or \$5 for a smaller district society. Every year the society has a meeting and each of the smaller district organizations sends a representative who has the same standing as any individual member. In the case of this Brussels organization there are about eighty-four smaller affiliated societies, with an average of about forty members each.

The principal work of the society is in the improvement of livestock and poultry. It organizes and conducts three series of exhibitions for cattle. One series is for cattle scoring from seventy to seventy-four points; another for those scoring from seventy-five to seventy-nine points, and a third for those scoring eighty or more points. The shows are held annually in April and May and each one lasts from one to three hours only. On an average there are about fifty entries of bulls and cows in a show. Prizes are about \$1 for the best cow in the low class; \$2 for the best cow in the middle class; and \$3 for the best cow in the high class. For bulls the first prizes in the three classes are about \$10, \$20 and \$30 respectively. One-third of this money comes from the government. One-third of the prize is paid at the time the show is held. The balance is not paid if the animals are sold, and the remaining two-thirds usually is not called for, because of the sale of the animals.

Farmers are obliged to bring their bulls to the bull shows. A committee consisting of a veterinarian and two farmers act as judges, and undesirable bulls are marked by a burn on the horn, after which they cannot be used for public service.

After the cattle shows, the society conducts a series of shows for strawberries, and another later series for poultry, and another for goats. They also give prizes for the best stables of members for the purpose of stimulating improvement in them. The competitions referred to are limited to very small districts, perhaps only three or four square miles. Shows are organized for larger districts also for poultry and strawberries, but not for cattle and goats, because it is said these kinds of stock are so much better in some vicinities than others that the latter would have no chance for winning prizes.

#### THE CENTRAL BUREAU OF AGRICULTURAL AFFAIRS

This is a small organization. Its purpose is the purchase of fertilizer, seeds and other supplies for members. Its membership is not controlled by the church, as is the following named League of Peasants. Some attention is given to relationship between the affairs of the society and the government.

#### LEAGUE OF PEASANTS

This is a large organization with headquarters in Louvain, and dominated by the Catholic church, the general secretary being a priest. Of about 2,000 villages in Belgium, about 600 have local leagues affiliated with the League of Peasants. The total membership is about 45,000, and members pay dues according to the land owned, this amounting to about sixteen cents an acre. Most of the members have only a few acres — 100 is a large farm, and often it is twelve or less. A farmer may become a member of the local league upon application and acceptance by vote of members. A chief purpose of the headquarters society is to organize smaller leagues and instruct the membership. Frequently a priest acts as head of the small league.

In addition to furnishing instruction, the society does a large commercial business. It purchases for its members machines,

fertilizers, cattle feeds, seeds and other supplies. It sells to other than members, but the members secure an advantage by participating in profits, which are said to have amounted to from one to two dollars a member each year in recent years.

The local leagues meet about once a month and members report what they need to purchase. These articles are listed and the head of the league sends the requirements to Louvain. Orders are accumulated there and purchases made in large lots at reduced rates. The organization owns three feed and fertilizer factories. At Louvain it is now proposed to carry a considerable stock of machines.

This league has organized an accident insurance branch for farm workmen, and if a farmer has three or more workmen he must carry such insurance. It also conducts a cattle insurance department. It acts as agent for an English fire insurance concern, securing special rates because of reduced cost of doing business. The league operates cooperative banks similar to the Raiffeisen system. These banks do not have salaried officers, and formal office hours, and when a peasant wishes to make a deposit he sometimes has to first search for the person to receive it. It is said these banks have more funds than they can well invest. The depositors receive three per cent. interest and loans are made at the rate of three and one-half to four per cent. Farmers desiring loans on long time secure funds on mortgage through a bank or on mortgage arranged by a lawyer, who may find an individual desiring to make a loan. Amortization attachments may be provided in connection with payments if desired.

A beginning has been made toward selling potatoes and other garden crops in cooperation, and some local leagues operate cooperative dairies. Other cooperative dairies are independent. When a local league organizes a cooperative dairy for the manufacture of butter or cheese, financial assistance is given from the head office of the league, the members of the local cooperative society accepting unlimited liability. As a rule, in cooperative dairies, the members are obliged to bring all their milk to the plant. This agreement usually lasts a period of years. As these dairies are uniformly profitable, the compulsory feature has not been found objectionable.

**BELGIUM**



**FIG. 171. HEADQUARTERS OF THE COOPERATIVE SOCIETY (BOERENBOND), LOUVAIN**



**FIG. 172. FLOWER SOCIETY SHOW, BRUGE**



## A NURSERYMEN'S ORGANIZATION

A plant and flower show conducted by one of these organizations was visited at Bruges. The exhibits occupied an open space in the city of less than an acre, and the interior of a large building near by. Exhibits included decorative shrubs and flowers, with an especially fine collection of orchids. Although conducted by a society of the province, exhibits were received from a larger area. The jury of awards included experts from England. Prominent government officials attended, and they, with guests and local dignitaries, gave much importance to the occasion.

### III DENMARK

The most widespread and complete organization of agricultural affairs was found in Denmark. The idea of cooperation among farmers for disposing of products to the best advantage is thoroughly established there. There are societies for many special purposes, such as manufacturing butter, collecting eggs, killing hogs, and buying supplies. These are found everywhere. One community may have several societies devoted to different purposes. Local societies usually serve very small communities. Those of the same kind have their common organizations for a larger territory, and these in turn may again be combined into an organization which serves its particular purpose throughout the whole province or country.

Undoubtedly one of the reasons for the success of cooperative effort in Denmark is the requirement that members of societies shall be loyal to their societies. A member of a dairy or milk society must bring his milk for a period as agreed. He cannot divert it without warning or even on short notice, to some other outlet which promises to pay a little better. The result is that the other outlets are not often presented. It is easy to see that competing business can not thrive unless conducted on reasonable basis, because the business of the cooperative societies is well conducted and the expense of operating them is held remarkably low and profits go directly to the producers.

Another reason for the great success of cooperation is the fact that this was necessary, in many cases at least, for the interests concerned to be preserved. Self-preservation had a most important part to play in getting the agricultural cooperation idea started and established firmly in Denmark.

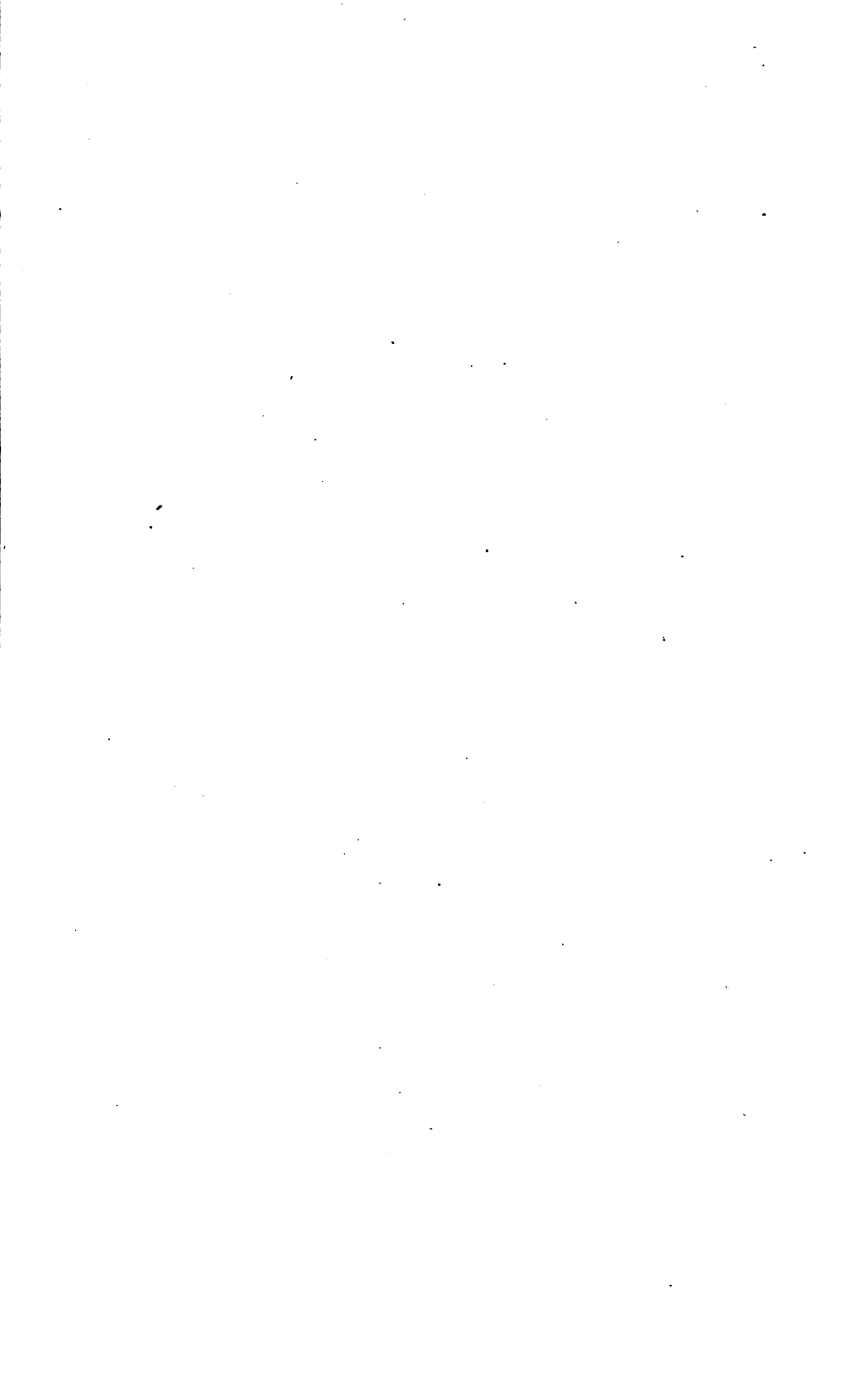
Still another reason for the great success of the movement is the sterling character of its leaders and great numbers who are participating in it. Their willingness to trust one another, their loyalty to the cause and to one another, and their recognition of the fact that difficult business can best be performed by experts and their employment of such persons to serve them, all helped.

Having made a study of the successful forms of cooperation

DENMARK



FIG. 173. DANISH PEASANTS' HOMES.



in Denmark, it was a surprise to learn that there is no law which makes special detailed provision for these associations. Such acts have been considered but they have not become effective. Perhaps the fact that these cooperative efforts have been free from legal control has been a greater benefit than detriment to them. The societies are not required to make elaborate official reports or comply with numerous regulations. They are favored, however, in the tax laws and credit must be given to the government for its direct and indirect aid in many forms. The federal Department of Agriculture, the agricultural college and schools of agriculture all support cooperation.

The department disburses funds affecting cooperation in several ways. There is an annual item of about \$14,000 for agricultural experts who receive part of their pay from the agricultural societies. More than \$250,000 is set aside for animal husbandry, and the chief items of this are the following: for livestock shows conducted by agricultural societies, about \$28,000; for premiums on livestock at big shows, about \$12,500; for premiums at stallion shows conducted under state auspices, about \$19,000; for premiums at bull shows conducted under auspices of the state, about \$19,000; for support of horse breeding associations, about \$38,000; for support of cattle breeding associations, about \$52,000; for swine breeding associations, about \$4,000; for sheep breeding associations, about \$1,250; for support of cow test associations, about \$30,000; for part payment of livestock advisers, about \$7,500; for competitions between herds of cows, about \$6,000; and for support of swine breeding centers, about \$11,000.

Direct help here referred to goes partly to members of peasants' societies to help them get improvements started. Beneficiaries are selected by the official experts and the societies working together. There is a special item of about \$25,000 for direct help to very small holders having only two or three acres. About \$18,000 of this is paid out as prizes for the best-conducted farms. About \$4,000 is used as traveling expenses. Frequently a farmer is given a railroad ticket to go to some other point and get information which he needs. There is an item of about \$10,000 to be used as direct help to peasant societies for encouraging

exhibits of superior methods and products and to encourage experimental work. The national appropriations also make liberal provision for expenses incurred in supervising the production and export of agricultural products and their rigid inspection and truthful labeling. This is followed so far that experts are kept by the government in both England and Germany to examine Danish products, to assist in finding better outlets for them and especially to find persons who commit frauds with or against these products, and to use all possible means to have such impositions stopped.

Under the provisions of the law, the government pays toward prizes at agricultural shows. At local shows the same amount is paid as is given by the societies, and at provincial shows twice as much as is paid by the societies. There is a state show in each of the thirteen districts, for bulls of three years and over and stallions of four years and over. The government pays to horse breeding societies one-sixteenth of the amount paid for the stallion, and duplicates this amount annually the next three years, thus paying one-quarter of the total value, but not more than a total of \$500. A bull society gets money each year from the government if the bull took a premium at the show, and the amount depends upon the percentage of cows bred which belong to cow test associations.

The government provides for a livestock show commission. Members are appointed by the minister of agriculture, and they supervise all government funds in connection with the livestock shows which are held by appropriate societies. There are thirteen local stallion and thirteen local bull commissions, whose chairmen are appointed by the minister of agriculture and are members of the state livestock show commission. Other members of the local commissions are appointed for three years by county authorities who receive proposals from agricultural societies which have at least 150 paying members and have spent at least \$75 of their own funds as premiums at live stock shows. There are also swine improvement committees assisted by the government.

Unfavorable criticism was heard of one feature only of the many efforts being made by the Danish government to assist and promote agriculture. It appears that the government has pro-

vided a sum to loan to persons who wish to secure small farms on easy terms. It is said that some well-to-do men, wishing to sell small tracts at exorbitant prices, will loan enough money to the poor man to enable him to make a sufficient showing to get the government loan and thus require the poor man to pay two debts. Judging from what was seen, it is safe to say that the Danish people will find a way to stop this imposition if it really exists.

#### CATTLE BREEDING ORGANIZATIONS

There are two distinct dairy breeds in Denmark, the Jutland and the Red Danish; the former found chiefly in Jutland and the latter on the island portions of the country. Representatives of other breeds are seldom seen. Efforts were made to improve the native breeds by outside crosses, but without benefit; and since 1870 these breeds have been kept pure and great improvement has been made by means of selection and care. The great success that has been attained has been due to intelligent effort rather than to mere cost.

One of the principal agencies to improve cattle has been the cattle shows. These are conducted by associations of farmers with help from the state as indicated. In order to emphasize the advantage of superior breeding on any farm, liberal prizes are awarded for groups of cows exhibited by the breeder. It is said that great benefit has come also from the bull shows, which are largely due to state initiative and support, and have served to emphasize the advantages of retaining good bulls. These shows are popular and the number of old bulls exhibited or considered by the judges, whether actually shown or not, is rapidly increasing. As many as 250 old bulls are entered in some local shows. The bulls are not judged by their appearance alone, but great weight is given to their performance. A bull over five years of age is debarred from a prize unless his offspring comes up to a certain standard. Necessary time is taken to permit the judges to see the offspring before the shows are open. Other points considered in judging a bull are his pedigree and the performance of his dam.

Competitions between herds of cows which receive special encouragement from government prize money, continue two full

years. Judges visit the competing herds about five times and an official tester calls once every three weeks to observe and record weight and fat test of milk, and weight and character of feed. In this manner attention is drawn to herds that show high averages of quality and performance. These farms are often referred to as breeding centers. Detailed reports of the herds are published for the information of the public. The owner of the herd receives an official statement with all particulars concerning his herd during the period it was under observation. The Danish system of drawing attention to superior herds is well worthy of imitation. Large numbers of breeders whose animals average high quality and value would remain comparatively unknown except for the government assistance, and it should be emphasized that it is an advantage to the country rather than to these individual breeders, to have them brought to public notice. The government has paid to the best of these breeding centers as high as \$600 per year. Government funds now are used for managing the competitions only, they having been so well established that they continue to be popular even without the large bounty.

On account of the high cost of feed and low price of milk, need of fertility on the farms, and inability to find more profitable work, the Danish farmers were forced to make improvements in the dairy industry in order to realize a profit from it as a business. The pressure upon them was the hardest about the time that the United States was exporting its large quantity of cheap farm products from the Middle West. Thoughtful leaders in agriculture concluded that the scrub bull was one of the greatest detriments to the business. At that time no particular attention was paid to the character of bulls used. One was apparently as good as another and they were kept in use only a few years and killed while still good for beef. Cooperative associations of cattle breeders were then formed. One of their principles was that they should use good bulls and these should be used only with the best cows, the cows to be selected by committees appointed for the purpose. When a cow had been selected its owner was expected to keep accurate accounts of her cost of keep, and the quantity and value of production. Offspring were expected to be exhibited at the local shows. Starting in 1883, this movement

DENMARK



FIG. 174. CATTLE SHOW, PROVINCIAL AGRICULTURAL SOCIETY, VEJLE



FIG. 175. HORSE SHOW, PROVINCIAL AGRICULTURAL SOCIETY, VEJLE





grew slowly, but it received an impetus after four years on account of official aid from the government. There are now many hundreds of these associations of cattle breeders, each having one or more bulls of merit. The government gives a prize as high as \$40 to bulls that have taken prizes in shows and are known to be sound and whose progeny is superior. It is probably not too much to say that the intelligence — not the cost — responsible for the introduction of the superior bulls has increased the output from many herds as much as 100 per cent. It is a matter of record that the average percentage of fat in the milk over the whole country has been increased five-tenths of one per cent.

Naturally the prominence given to good bulls has resulted in increasing their value and it has not been uncommon for associations to pay \$800 to \$1,000 for a bull.

The members of the associations are assessed less than \$1 a cow.

#### COW TEST ASSOCIATIONS

These organizations are called Milk Control Associations in Denmark and they supplement and are closely affiliated with the work of the breeders' associations. The special work of these associations is to keep records of feeding and production. So much detail work is involved, especially in the testing of the milk, that it was found best for neighboring farmers to organize and employ an expert to serve all farms alike by turn. The first of these associations was formed in 1895. The expert makes his visits once in every two or three weeks. He keeps all data of interest concerning each cow, including breeding and offspring and disposition of animals. His data is recorded in what is known as the family herd book of the farm. There are several hundreds of these associations in operation. Their work is assisted by state aid, but members of the associations pay from twenty-five to fifty cents per cow a year for their share of the service rendered.

#### ORGANIZATIONS FOR EXTERMINATING BOVINE TUBERCULOSIS

This disease has brought its problems into Danish dairying, but apparently very successful efforts have been made to check the disease in places and to eradicate it from other places. In doing this, cooperative societies are again exerting their beneficial in-

fluence. One of these is in operation on Bonholm Island; it was established in 1905, and has eighty members, seventy-five of whom now have herds free from tuberculosis. Another one is in South Zealand; it was established in 1911, and has 111 members who own 3,400 cows.

The disease was not very prevalent on Bonholm Island when this society started, but during the last twenty years probably one-third of the herds represented have been afflicted. Members having the disease in their herds have followed the Bang system and thus removed the last traces of the disease from their cattle. Members are under agreement not to bring any animal into a healthy herd unless it is known to have passed the tuberculin test; but calves under one month of age and from a healthy herd are exempted. It has now become generally known that the herds of this association are either free from disease or honest efforts are being made to free them. The result of this is that considerable numbers of buyers have come for stock and are paying well for it. Members are advised to use the Storch test with skimmed milk to ascertain if it has been properly heated. One of the associations appoints a member who tests the skimmed milk of the creamery in this manner daily.

In most cases where the disease is present the farmer divides the stable by a temporary tight partition with the healthy cows separated from the others. The number of years that known tuberculous cows stay on the farm depends on how good producers the reactors are and how anxious the farmer is to clean up. Cows with physical signs of the disease are supposed to be excluded.

The government gave one of these societies about \$125 at the time of its organization. Members pay fifty cents each a year. Once a year a meeting is held for all members. The managing committee meets irregularly. It is composed of five members and they are careful to attend to the needs of their position. At the meeting the progress of the work is discussed and the president of the society, who is a veterinarian, gives general information of conditions in and out of Denmark. When this work started a number of members were delivering tubercular hogs to the slaughterhouses. Hogs delivered are now healthy.

At one dairy farm where tuberculosis has been eradicated by the Bang method, the stable was divided by a tight partition. About eighty per cent. of the herd reacted to the tuberculin test, also forty per cent of the young stock. The healthy part of the herd is tested by tuberculin twice each year and any reactors are promptly changed to the diseased section. Calves born in this latter section are promptly removed from their diseased mothers and raised on milk pasteurized by boiling or milk known to come from healthy cows. A physically sound reacting bull is permissible for the non-reacting cows, the contact being as brief as possible. By this method the healthy part of the herd gradually increases in number, while the reacting part is gradually reduced. The partition is moved from time to time so as to give larger space for the healthy animals until they occupy the entire space. Great care is taken in disinfecting premises occupied by reacting cows before healthy cows are admitted into them. There are now a considerable number of Danish herds that were badly infected by tuberculosis but have been freed of the disease by the Bang method treatment. This method is recommended for herds that are being increased by breeding rather than by buying.

Since 1899 Dr. Bang has not advised testing whole herds if apparently they are badly infected, but he advises treating them all as though infected. In such a case those showing physical signs of the disease are removed and as the new healthy herd is built up from the offspring of the diseased cows the government tests these supposedly healthy animals twice each year. The farmer who agrees to isolate reactors and comply with instructions secures free veterinary assistance. If he changes his mind and wishes to be relieved of his agreement this may be arranged for by his paying for the veterinary service received.

As an illustration of what a careful farmer may do, the following instance is given: A farmer had seventeen cows and four calves. All the cows but an old one reacted to the test. The entire seventeen were kept together and separate quarters were made for the four calves which had not reacted. Each day these calves were cared for before the rest of the herd. Other calves were added and each one was allowed its mother's milk, which

was milked by hand, for the first day or two. After that, they received pasteurized milk. In three years there were twelve head of young stock and they were tested for the first time. One reacted and was placed with the old cows, one of which had dropped out. From this time on the cows were gradually sold off until the last had gone. At the end of five years seven old cows were remaining; the next year, only three, which were sold. Then their quarters were thoroughly disinfected and the young animals transferred. There have been no reactors on this farm since. The total cost of eradicating the disease from this farm was estimated at about \$40, and the farmer naturally was greatly pleased. He was a common peasant farmer, but careful and thorough in his work. It is reported that hundreds of such cases are recorded in Denmark.

The government pays for animals which it orders killed on account of disease, as high as \$22 having been paid for a cow. About \$20,000 is used this way annually.

#### DAIRY ORGANIZATIONS

Cooperative societies in the interest of dairying are most often pointed to as examples of good results in cooperation. The first cooperative creamery in Denmark was started in 1882. In 1912, there were 1,177 cooperative creameries making butter and cheese. The members of these creamery societies agree to deliver all their milk to the creamery and to be individually as well as jointly responsible for its debts in proportion to the number of their cows. With such a pledge, the banks are willing to advance the entire amount of funds necessary to provide buildings and equipment. This varies in cost from about \$5,000 to \$7,500. Since the cooperative movement began there has been a great increase in quantities of dairy products and in yields of crops, especially those needed in dairying. Coarse feed is made up largely of roots, ensilage not being used because conditions are not favorable in Denmark for the growth of corn. There are now about 1,100 cooperative creameries, 300 or 400 being worked on private or other systems. The total output of butter from these cooperative creameries amounts to about 200,000,000 pounds

**DENMARK**



**FIG. 176. THE DAHLUM AGRICULTURAL SCHOOL COW STABLE**



**FIG. 177. BUTTER FROM COOPERATIVE CREAMERIES IN EXPORT CONTROL**  
**II—17 COPENHAGEN**



annually. This constitutes the chief export item, England being the great market. There are nearly 1,300,000 cows in the country. Hundreds of herds have more than 100 cows. Small farmers, however, carry from four to ten cows.

An authority in Denmark, discussing the wonderful progress of his country, with special reference to cooperation, has said: "The mainspring of our success was the policy of moving together, all for each and each for all. Our advance is a movement of the people, the leaders being found in all ranks."

The organization of a cooperative creamery proceeds in Denmark after the following plan: Assurance having been secured that there is sufficient milk available to keep a creamery busy and that farmers are favorable to the scheme, preliminary meetings are held. Farmers agree to supply all their milk, be responsible for the necessary loan to start the enterprise, and to conform to prescribed rules which they themselves or their committees will promulgate. These rules refer to methods of feeding the cows, treatment and care of the milk, dairy utensils, delivery of milk and other items of management. A board of managers is appointed which selects a chairman, a secretary and a treasurer, which offices are not combined in one person. The managers are authorized to secure the loan necessary to begin operations. The period of this loan may be as much as ten years. The records of payment of such loans have been good. A member wishing to retire from the association may do so by making a stipulated payment for each cow in his herd. This payment decreases as the years of his agreement shorten. It may be as high as \$4 a cow at first. If a farm is sold, the successor must carry out the agreement that has been made. New members taken in after the work is under way pay \$2 to \$3 a cow.

Butter scoring contests are helping to keep up the standard of butter exported. The government requires that butter to be exported shall be made from cream heated to eighty degrees centigrade. The butter must not have over sixteen per cent. water, or contain analine color. The official brand must be used, and the quality must be reasonably good. Scoring contests are held to secure quality, and are under official supervision. Telegrams are sent to the creameries at irregular intervals. Immediately

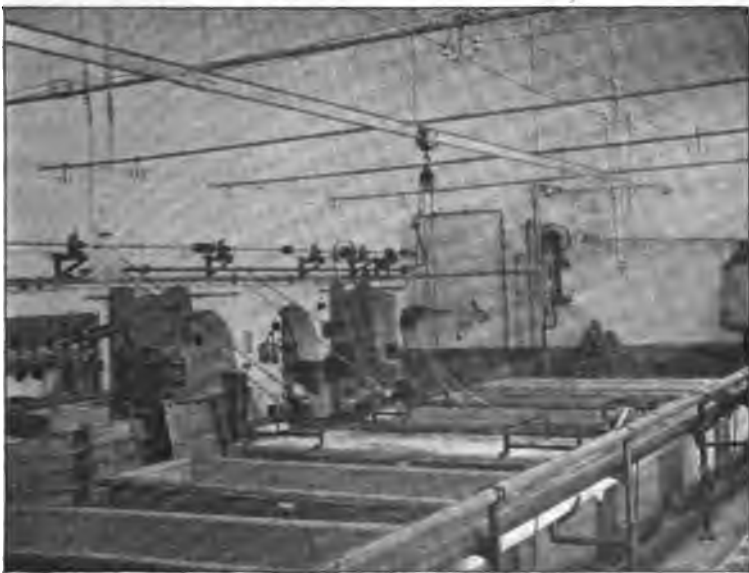
on receipt of the message a package of butter ready for the usual market must be forwarded. Three or more such messages are received by each creamery each year. After arrival at the collecting point the butter is held two weeks so that it will be in about the same condition as though it had been shipped to the English market. A large number of these samples of butter were seen at the experiment station in Copenhagen. When they were opened, the official brand on thin unparaffined paper was conspicuously displayed. Necessarily this was destroyed in its removal or the removal of any butter. One of these brands is at each end of the firkin. Another official mark is on the outside of the firkin beneath the hoops, so that it cannot be easily applied or tampered with after the firkin has once been used. The contents of each package is stripped and weighed. The different lots of butter are then put in a series of metal covers, so made that only the butter in the firkin is exposed to view. This prevents the judges from recognizing what creamery output they are examining or from being prejudiced by the appearance of the butter. But doubtless the chief reason for this extraordinary precaution is to protect the judges from unjust criticisms of the character indicated. Three different men judge each sample and their results are averaged. Three trios of judges go through the same lots of butter and their three averages are averaged to secure the final result. A score representing fifteen points is used. These are not divided into smaller values for different conditions, such as body and flavor, as is common in America. The creameries are then not given their exact standing, but their relative standing. This is to prevent difficulty between creameries and their respective markets. The reports of the judges are highly valued by buttermakers and have contributed a great deal toward maintaining the high standing of Danish dairying.

In the building where butter is scored, a comfortable sitting room or club room has been provided for the judges, and the walls are decorated with pictures of leading judges and buttermakers. A limited number of the most successful buttermakers — those who have always stood in the best third in the contests for the past nine years — have their pictures displayed, and such

**DENMARK**



**FIG. 178. RECEIVING PLATFORM, TRIFOLIUM COOPERATIVE CREAMERY, HASLEV**



**FIG. 179. CHEESE ROOM, TRIFOLIUM COOPERATIVE CREAMERY, HASLEV**





of these as continue their good record for another four years will receive high recognition.

As is the practice with other subjects, the local creamery associations are banded together into larger ones; for example, all the creameries in the several counties of Jutland make thirteen societies, and these in turn are combined into one large one. There are two other such societies in Denmark. The three have a national meeting at which questions of broad importance are discussed—such as creamery legislation. The expenses of representatives who attend the larger meetings are paid by the smaller associations represented. Creamery societies do not receive government money.

Creamery managers have an organization of their own. It is about twenty-five years old and has twenty-six branches, one for every county and parts of some counties. Their national meeting is attended by 200 delegates, the expenses of many being paid by the local societies represented. Each branch is required to hold from six to eight butter competitions annually. Special exhibits may not be made; the creamery must send from its regular output. The highest third of the exhibits are awarded prizes, such as spoons and plates, the honor being considered the best reward. The better half of the exhibits receive diplomas.

The Trifolium Creamery at Haslev was visited. It is one of the best known creameries in the world. The equipment includes well-constructed, permanent brick buildings having tile and brick floors, thoroughly sanitary throughout. The best of equipment is used. This creamery and its outlying plants receive milk from its 100 members only, who own large areas of the land and operate through tenants. Skimmed milk and cream are pasteurized separately. The latest economies have been introduced, even a device which permits milk cans to drain a few minutes so as to save the drippings after the can has been dumped and while it is on the way to the washroom.

Besides butter, this establishment makes cheese from whole milk, half-skimmed, and full-skimmed milk. Swiss cheese is also made, and the valuable constituents of the whey are saved.

A cooperative creamery in Odense was visited. It occupies a building erected in 1910; has twelve employees in the dair-

and nineteen men engaged in bringing in milk and delivering products. It operates some milk routes in the city as well. It has 130 members, possessing about 1,000 cows. These members are under contract to bring all their milk as long as the company's debt is not paid. Each member is liable for indebtedness of the organization according to the size of his dairy. The investment represents close to \$60,000.

The equipment was procured through a bank loan and the society is paying this back at the rate of \$2,500 annually. Milk is purchased on the fat test.

The managing committee has seven members, one each from seven villages, these being elected by members in their respective villages. Each member serves two years. The president of the society receives about \$100 per year as an honorarium, besides expenses to attend necessary meetings. The other six managers receive no pay except railroad tickets and meals when attending meetings. The creamery is well constructed and equipped. It has a cream tank which may be lowered to receive cream from the separators, and lifted to deliver it into the churns. From this plant milk is retailed at the rate of about five cents a quart when coming from tuberculin-tested cows and not pasteurized. The same amount of "common" milk, pasteurized, sells for about ten per cent. less.

#### SWINE INDUSTRY ORGANIZATION

Swine raising is well developed and the industry has grown to large proportions in Denmark. It is fostered by cooperative associations in the interest of improving hogs and marketing their products. The preparation and marketing of bacon through co-operation has come to represent one of the greatest assets of the country. It is curious and interesting to learn that this industry has reached its present development largely as a result of conditions that were regarded as a great calamity. In 1887, a swine disease appeared in Denmark and the shipment of live hogs to the usual markets in Germany was suddenly stopped by that country. Many Danish hogs had been slaughtered in Hamburg, where bacon was prepared and forwarded to the English

**DENMARK**



**FIG. 180. FARMERS' COOPERATIVE CREAMERY, ODENSE**



**FIG. 181. FARMERS' COOPERATIVE CREAMERY, HASLEV**



**DENMARK**



**FIG. 182. NATIVE SOWS AT PIG BREEDING CENTER, FYN**



**FIG. 183. SHEEP SHOW, PROVINCIAL AGRICULTURAL SOCIETY, VEJLE**

market and sold at good prices. The sudden stoppage of the outlet for live hogs was a stunning blow to the Danes. Immediately there came to be a great surplus of hogs throughout the country and prices fell to low record points. The farmers naturally, and doubtless under good leadership, thought of cooperation as their only salvation. At this time they were seeing the advantages of cooperation in creameries and some other branches. Cooperative bacon factories were then established. It has been said that this movement was started at a tremendous loss; but it has proven to be worth far more than its cost.

Almost all Danish farmers keep hogs. An average of one hog to two persons throughout the country is not considered excessive in Denmark. There is a good native breed which is reasonably satisfactory for general requirements. These native hogs are being improved by means of selection, which is based on carefully conducted observations both while growing and after slaughter. The aim is to produce a long, fleshy hog, weighing about 200 pounds when about eight months old, with long body, fine bones, fine skin, and well developed back and belly muscles and hams. The best product for the English market is secured by breeding the native sows to large English Yorkshire boars. The cross is superior either to the pure native or pure Yorkshire. The native sow is hardy, grows fast and gives large litters, and is a good milker. It is said that a farmer may expect seventeen to twenty pigs annually from each sow. The quality of the swine is kept up by maintaining a few selected farms at convenient points where natives and Yorkshires are kept pure, the two breeds not being kept on the same farm. These farms are known as swine breeding centers and are recognized for one year at a time only. Some of them are managed by committees, on which the bacon factory has a representative. Breeding animals are valued according to their own development and according to the character of their young. The determination of this character goes so far as to examine the bones and their breaking test, as well as the quality of the bacon. A considerable number of breeding centers have been recognized by the government and receive special benefits. There are about eighty government approved breeding centers for native hogs, and twenty for York-

shires. Special classes are provided for swine at livestock shows and prizes are awarded on merit.

For pig breeding work Denmark is divided into seven districts, and the state cattle commissioner has an assistant in each to look after the work. Each assistant is helped by a committee of three, one, the chairman, appointed by the government, one by the agricultural society and one by the bacon-curing society. The technical assistant is usually secretary of this committee, which committee decides on the farms that shall be made breeding centers. The government distributes about \$11,000 annually to these centers. The amount, however, is now being reduced. There are three experiment stations cooperating with the breeding centers, and pigs six or seven weeks old from different sows are sent to these stations for scientific observation. The station feeds and raises the pigs until they are six or seven months old, and on the basis of their results, as well as the results of slaughter, the sows are valued for future use. A farmer wishing to have his farm recognized as a breeding center must apply to the provincial agricultural society. A committee is designated to make an inspection. Their report is made to the government committee of three. Since 1895 when the breeding centers were started, they have distributed over 30,000 sows to farmers.

One of the experiment station farms for hog breeding was visited. There were twenty-four pens for pigs and from two to four pigs were under test from each of the different breeding centers contributing to this station. The records of these pigs included breeding, weight and feeding. Their slaughter is an occasion of great importance. Experts are present, and as the result of their examinations sows are designated as good breeders or otherwise. The owner of this farm secures his small pigs at a low price, paying about \$2.50 each, the breeding society returning half of this amount to him. He receives market value for the hogs sold.

A swine breeding center for native hogs was visited. It is the property of a nobleman, but is operated by a tenant. There were twenty-five sows and three boars which had been selected by the supervising committee. This farm has been in operation as a breeding center about fifteen years. The size of litters taken

at random but in order from the records shows 14, 8, 12, 14, 15, 12, 12, 16, 8. There are two litters each year from each sow. The sows are bred when one year old. They eventually may weigh as much as 500 pounds. This farmer receives about \$125 annually from state funds, which is intended to pay him for his extra trouble in keeping his herd of swine pure and maintaining his interest in the public features of his work. A farmer wishing to be recognized must operate his farm a year under observation of the Royal Agricultural Society. If it finally proves satisfactory it may be accepted. The committee is expected each year to endorse the very best farms only, thus preventing state aid from becoming too common. Farmers in the neighborhood are advised to buy their sows at this farm.

There are about 300 cooperative pig breeding societies, and they have been paid by the government about \$12 a year for each acceptable boar kept; but this payment recently has been ordered suspended and it is thought that the cooperative slaughterhouses may arrange to carry it in order to continue sufficient stimulus to keep the best boars within reach of all farmers. The fact that the cooperative societies are considering continuance of payments formerly carried by the government is strong evidence that some encouragement of this form is needed by a breeding society.

#### BACON ORGANIZATIONS

Denmark has forty-one cooperative slaughter houses handling about 1,300,000 hogs annually, which is two-thirds of all the hogs killed. The first was started in 1887. About half the slaughter houses are cooperative, the other half private. The cooperative factories are located at convenient points so that very few shipments of more than fifteen to twenty miles are necessary. When a shipment of hogs has been consigned the owner's responsibility is ended. An insurance fund protects against loss enroute. On arrival at the factory, a metal number is fastened to an ear of each hog to identify it or its carcass. The hogs condemned for disease, most commonly tuberculosis, are covered by cooperative insurance. The farmers receives his pay based on weight taken after slaughter, with the bowels only

removed, and upon the quality of the carcass as shown when it is cut up. This system is said to give satisfaction. Prices are fixed each week by the committee in charge of the factory and these announcements are rapidly spread throughout the territory concerned. Part payment is made for hogs when they are delivered, and a part after they have been weighed and judged as to quality. Profits earned are distributed once each year. The cost of killing and curing averages about sixty-five cents for each carcass. A slightly larger amount is named to cover freight and cost of selling in the British markets.

There is a cooperative bacon curers' association which is interested in subjects of concern to the local societies. This association holds frequent exhibits of bacon. Members are required to ship on telegraphic request a sample of bacon from their regular stock, such as would be forwarded to the English market. The exhibits are examined by a committee of experts in Copenhagen and helpful criticisms are sent to the contributing factories. Faults are carefully followed up. If the examination of the bacon, for example, indicates that the farmers are not taking proper care of their hogs, an expert on the care and feeding of hogs is sent to the community to give instruction.

The cooperative association of factories also has made provision for assisting different members in the case of labor troubles of any kind. They aid also in connection with insurance matters.

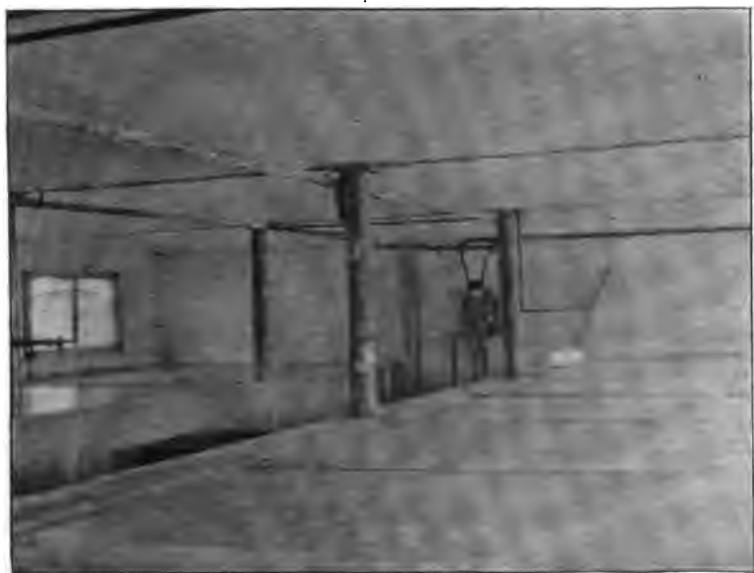
The cooperative swine slaughter house at Haslev was visited. It has fifteen employees and kills about 25,000 hogs annually. Some other of the cooperative societies handle four times as many. This society is sixteen years old.

Hogs are killed two days each week, and arrangement is made for an official government veterinarian to be present to inspect all carcasses. The building and outbuildings are inexpensive but suitable, and are kept in first-class order. By-products are carefully saved and disposed of to advantage. The blood is boiled, the fluid being pressed out of it and the solid portion used as feed. This material brings about two cents a hog. Members may agree to deliver their entire supply of hogs or a given number. For failure to do as agreed they must pay about \$2.50 for each animal short, unless good reason is given for the

**DENMARK**



**FIG. 184. COOPERATIVE SWINE SLAUGHTER HOUSE, HASLEV**



**FIG. 185. STORAGE ROOM, COOPERATIVE EGG SOCIETY, HASLEV**



failure and this is accepted by a committee of farmers. The members make contract to run several years, and all these contracts expire at the same time. At the end of the year the surplus is determined and divided among the farmers according to the number of hogs delivered. No hogs are received from non-members. The cost of membership is nothing, but it carries a liability of about \$1.50 a hog on the member's farm. On account of this liability, the cooperative society easily secures credit at the bank for necessary loans. In this manner capital is obtained for erecting buildings and getting equipment, repayment to be made in twenty years.

A cooperative egg collecting and shipping association is operated in connection with this slaughter house and the two branches represent an investment of about \$37,000.

Ten of these cooperative slaughter houses have organized for the purpose of marketing their product. They use a common brand, which is protected in England.

The slaughter house at Odense was visited. It belongs to a cooperative association having over 6,000 members, under agreement to bring all their hogs to this plant for slaughter. About 2,000 are killed each week. The members may bring cattle also for slaughter if they desire. The buildings serve as the municipal slaughterhouse, the owners having a contract to kill all animals brought. The buildings are made of tile, brick and cement and are conspicuously clean and neat. This plant was built as a private venture but later was sold to the farmers' cooperative society.

Rules covering meat inspection here are very strict. If animals in Odense are not killed in this place, their carcasses and organs must be brought in for inspection and the inspection costs as much as it would cost to have the killing done at the slaughterhouse. Government meat inspectors are on duty constantly. They even remain when the plant is being cleaned up after slaughtering and dressing is finished. The corps of inspectors includes four veterinarians and two assistants. Meats receiving highest approval are marked with a blue stamp; second class, with a square black stamp; third class, which is the poorest, must be boiled at the slaughter house or destroyed. Boiled meat is purchased by poor people who call for it.

## HORSE BREEDING ORGANIZATIONS

Agricultural cooperative societies, especially through their shows, give attention to the improvement of horses. Attractive premiums are offered for stallions and mares, half of this money being contributed by the government. Stallions in state shows must be four years old or over. Those over seven years of age are judged entirely by their progeny. About once in five years a show is held with special inducements for the exhibit of old stallions, the government paying the larger part of the premiums. At a horse show visited, the first prize stallion was six years old and weighed nearly 2,000 pounds. It belonged to a horse breeding society. Regulations provide that horse breeding associations shall not get a government grant for their stallion unless he has been a prize winner at a local show. Horse breeding associations are assisted by state funds to the amount of as much as \$500 a year to a society for assisting in caring for the expense of a high-class stallion. There are nearly 300 of these societies, a few of them having two stallions each.

## POULTRY AND EGG ORGANIZATIONS

The poultry industry is making rapid progress also. Cooperative societies collect eggs and test, pack, label and export them. There are over 500 of these local collecting societies, and ten or twelve large central plants to which the smaller ones forward their product. Members of these egg-selling societies must agree to bring all their eggs to them for one year. They may withdraw from the society, but must give notice of their intention at least three months before the first day of January.

Eggs are sorted and packed according to size. Each egg shows the number of the local society, or circle, and also shows the number of the member. The eggs are examined by electric lights and those found good are marked by the society's export stamp. When a bad egg is found the responsible member is fined twenty-five cents. Members must collect eggs twice daily. Collectors call at the farm once each week.

At Odense there is a provincial branch of the National Export Association. It is located in a well-built brick structure costing

**DENMARK**



**FIG. 186. COOPERATIVE EGG SOCIETY HEADQUARTERS, ODENSE**



**FIG. 187. PACKING ROOM, COOPERATIVE EGG SOCIETY, ODENSE**

**DENMARK**



**FIG. 188. PACKING ROOM, COOPERATIVE EGG EXPORT SOCIETY, COPENHAGEN**



**FIG. 189. SEED TESTING LABORATORY, COPENHAGEN**

about \$10,000. It has a small, neat office in the front of the building, and this is separated from a large main working floor by a glass partition. There are thirty-five local egg societies contributing to this one.

The Danish Cooperative Egg Export Association started in 1895, now comprises 550 local associations, with about 45,000 members.

#### FARMERS' BUYING SOCIETIES

Apparently as great benefits are secured by Danish farmers through their cooperative buying as through their selling societies. In either case, they eliminate some of the middlemen and secure for themselves part of his profits.

At Aarhus is the headquarters of the Jutland Cooperative Feeding Stuffs Society. It operates in Jutland only and has six branches which were started in 1898. There are 34,000 members, in 608 local affiliated societies. The members pay no fee, but each local society guarantees about \$125, and it conducts its own operations on the basis of unlimited liability of members. The members agree to buy all their feeding stuff materials through the society for a period of five years, and they may be penalized if this agreement is broken. One employee gives all his time, or as much as is necessary, to each local society, ordering all supplies from the central organization. Members must pay within thirty days after a purchase or pay eight per cent. interest on the debt. If the payment is made in less than thirty days, the buyer receives five per cent. interest for the time saved. This society makes sales to non-members, and it sometimes sells the products of one member if another wishes to buy. Each 100 members in the local district, or less, have a representative at the principal annual meeting, and this meeting selects thirty-five members who hold four meetings each year. The local societies pay the expense of representatives in attending the meetings. These thirty-five members elect a managing committee of five which meets monthly, its members having an allowance of necessary third-class railroad fare and about \$1.50 a day for other expenses. The president receives a nominal salary. He visits the society headquarters about twice a week. The other members of the managing committee receive about \$60 a year.

This society sells about one-third of all the feed sold in Jutland, the balance being handled by private concerns. It operates mills for grinding feed, and last year ground about 45,000 tons of meal and a large quantity of grain. It does not now own its building, nor many, if any, of the fourteen storehouses located at different points. There are 200 employees, including forty-five clerks, fifteen of the latter and the auditor being located at the head office.

Its reserve is rapidly increasing and will soon reach the legal limit. Officers of the society admit that it is being conducted largely for the selfish purpose of its members, who wish to get good supplies at a low rate. They claim also that a patriotic purpose actuates the members, as they commonly think Denmark needs such organizations. The writer was curious to know what reason would be given for five men to spend their time and some of their money each month and carry the responsibility of managing this organization. These men have no advantage over other members in buying and there is no competition among members to get the positions. It was found that members believe that service on the committee is a duty carrying with it some honor.

There is a similar society for selling fertilizers. It occupies the same building and has the same president and managing director; but the two societies have different managing committees.

There are three other large similar feeding stuff societies in Denmark, and as yet no organic connection between them.

#### CENTRAL ASSOCIATION OF COOPERATIVE STORES

This association is located in large permanent structures in Copenhagen. There are 1364 cooperative stores in Denmark, of which 1284 are direct members of this association. Each local member store trades directly with headquarters, there being no intermediary organizations. There are nearly 200,000 members, about one-third being farmers. These members are free in regard to making their purchases here or elsewhere.

A local society or store advances about \$1.25 for each member. Members' fees vary from about fifteen to fifty cents. The local stores are expected to sell to their members only, but they may sell to others if a legal license is secured. Outsiders purchase at

**DENMARK**



**FIG. 190. COOPERATIVE FEEDING STUFF SOCIETY, BRANCH STORAGE HOUSE, VEJLE**



**FIG. 191. SALESROOM, COOPERATIVE SLAUGHTER HOUSE, ODENSE**

DENMARK



FIG. 192. COOPERATIVE STORE, COPENHAGEN



FIG. 193. COOPERATIVE STORE, COPENHAGEN

1914

the same prices as the members, but do not share in the division of profits at the end of the year. Farmers' products to be disposed of are not handled. In one year this society did a business amounting to about \$12,000,000. It operates many departments and aims eventually to handle all the supplies needed by its members, special attention being given to groceries. At present it does not carry a large assortment of drygoods.

The cooperative store at Haslev was visited. This cooperative society has 250 members. Its sales are chiefly of groceries and small household supplies, and although the members are not under agreement to buy here, they patronize the store liberally. The membership is made up chiefly of town people, but includes as well many farmers. Each member has advanced about \$2.50 and assumed unlimited liability. The store is located in an unpretentious building and the work appears to be conducted without undue expense of any kind.

#### THE ROYAL DANISH AGRICULTURAL SOCIETY

This society was established in 1769 and has for its object the promotion of agriculture and all connected industries. Before the organization of the government Department of Agriculture, this society was used to a large extent by the government. Considerable government money is now disbursed through it for various purposes, but most of its appropriations are for disbursements in the interest of agriculture and pass through the provincial agricultural societies. Agricultural experts of various kinds are connected with both this organization and the latter. This brings the two kinds of organizations together on some important activities, such as the larger stock shows. It is said that as a general rule the Danish government requires agricultural societies to try their new schemes, and then if found good, the government helps to promote the plans by grants of funds on conditions which the government finds it desirable to make.

The activities of this society are conducted by a board of managers elected by the members. There are thirty-six managers, the term being for three years. The members of the board represent the different districts from which they are elected. The board of managers appoints committees and directs the activities of the

society. Annual meetings are held. There are about 800 members, the membership being made up of individuals and such agricultural societies as wish to join, the membership fee being \$5. Members have the privileges of the meetings, receive reports, and enjoy a twenty-five per cent. discount from the usual rates on analysis of fertilizers, water, and other things, made at the society's laboratories.

There is a permanent secretary, who receives a salary, and a treasurer. Expert advisers on different agricultural subjects are maintained. Persons wishing to have their advice must pay traveling expenses and about \$1.75 per day for services. There are two advisers on plant culture, two on horse breeding, two on cattle, sheep and swine raising, four on dairy subjects, one on agricultural machinery, one on horticulture and eight special assistants in swine breeding. These do not constitute all of the expert advisers available to Danish farmers. One of the dairy advisers is a thoroughly trained expert, and was sent by the society on a salary and expense allowance for a two-year trip through France, Italy and America for investigation purposes. One-half of his time was spent in America and most of this at an agricultural college. He directs the use of the government fund for enabling dairy workers to take short trips to perfect themselves in their work. For example, a buttermaker not knowing how to operate a refrigerating plant or an electric plant and wishing to learn is enabled to acquire the desired information. The adviser of the society may place him without expense at a suitable dairy school or creamery for a month or so until he has learned what he needs to carry on his work satisfactorily. Naturally this expert cooperates closely with the Creamery Buttermakers' Association. Over 2,000 buttermakers have received help such as is indicated above since the work was started.

A farm employment bureau is maintained. The society also conducts tests of agricultural machinery. The expenses of these tests are borne by the government and the work is done in co-operation with the government adviser on farm machinery. A special committee gives attention to the control of feeding stuffs with a view to reducing adulterations. A committee arranges for agricultural apprentices to secure training in practical farm work

DENMARK

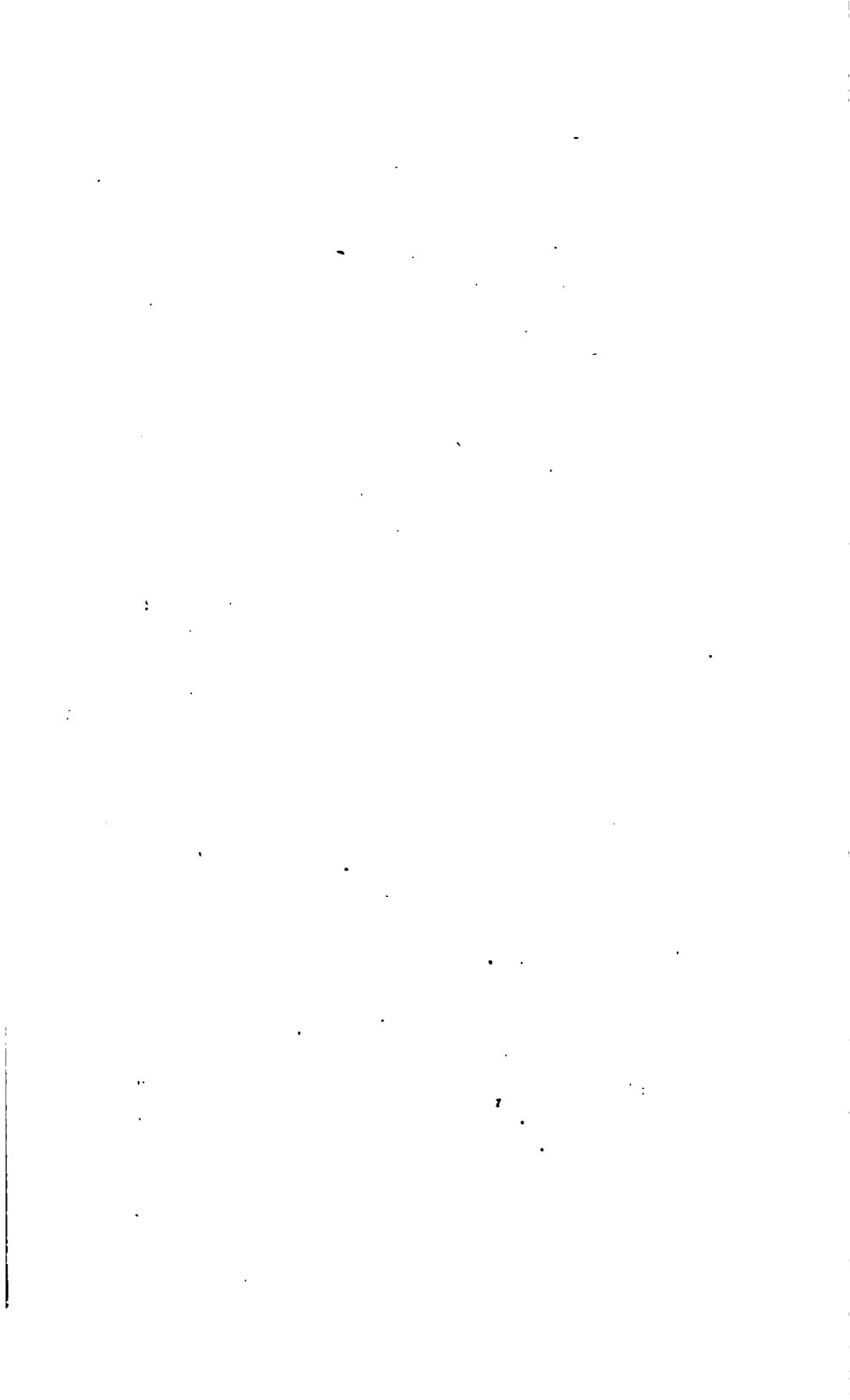


194. GENERAL OFFICE, ROYAL AGRICULTURAL SOCIETY, COPENHAGEN.



195. LIBRARY, ROYAL AGRICULTURAL SOCIETY, COPENHAGEN





large and small farms. For this purpose, seventeen-year-olds who present proper credentials are sent out under the servants' law, receiving a certificate after a satisfactory service, which, on a large farm, means three years. Small compensation is allowed for the services. The committee on agriculture has been organized about twelve years and thus far has sent out annually thirty-one apprentices. Another committee, organized in 1910, is making efforts to introduce better methods of bookkeeping. There are committees also on bovine tuberculosis, Copenhagen cattle quotations, and literature. The last recommendations concerning libraries to be supplied to agricultural societies. One of the oldest committees awards honors for most creditable farm work, especially on small farms. This committee also awards honor premiums to farm workers who have rendered long and faithful service and whose work is well proven. These latter awards are in the form of cups and medals. The society publishes annual reports, special reports on various subjects.

There is a memorial fund of about \$6,000 which is used to assist and educate young men; it also administers donations and gifts. These are extended to poor and deserving persons who are engaged in agricultural work. Much of the support of the society comes from federal money.

#### GENERAL AGRICULTURAL SOCIETIES

The provincial society at Odense, now more than a century old, is well established. It is located in an old but suitable building. It was founded as a patriotic society, and it may be said that it continues to serve a patriotic purpose by now devoting itself to the improvement of Denmark's fundamental industries. The permanent employees include one secretary, three consulting experts in horse and hog breeding and three in plant breeding. There are also three general employees in the offices. This society does not charge dues or sell for its members.

The chief work of the society is through its advisers whose services are available to members. A show is conducted each year of the four kinds of livestock. Experts of the society are preparing family herd books for about 250 farmers. One of

these herd books for a long established farm was seen at the office. It shows a separate family tracing back to each member of the original herd. Records of all cows are kept, including breeding, performance and feeding. Such records are invaluable in careful breeding work.

The society publishes a herd book limited to pure bred cows. Entries are made from the family books, but only if the cow equals or shows better than the minimum standard of fat production. The society conducts two-year tests and competitions between herds. The committee in charge is composed of three members, one selected by the government and two by the society. An employee of the committee visits each herd every two weeks to make full observations. The farmer must report to this person a full statement of his own crop yields and what he buys, which enables the committee to check his available feed with the total reported as having been used. Two-thirds of the expenses of these competitions are borne by the government and one-third by the society.

There are affiliated with this society a large number of local organizations promoting the same work, which is similar elsewhere; namely, cattle breeding, hog breeding, and horse improvement. All of these activities are represented in the managing committee of the Provincial Agricultural Society.

Plant breeding also receives attention. The society conducts seed and variety tests and experiments with fertilizers and lime. The tests are made by members with the advice and assistance of the society's experts. Farmers who are particularly successful in growing good varieties of desirable seed are pointed out to their fellow members. In one year this organization conducted nearly 250 experiments and demonstrations of the kinds indicated.

All provincial agricultural societies are united in one called the United Danish Agricultural Societies. The president, vice-president and secretary of each provincial society constitutes the national organization, which has several meetings each year.

#### CREDIT SOCIETIES

Credit societies are organized on different systems than have found such great favor in Germany and several other countries.

**DENMARK**



**96. HEADQUARTERS, PROVINCIAL AGRICULTURAL SOCIETY, ODENSE**



**FIG. 197. DANISH FARMS**



There are about 175 associations for loaning money to farmers for temporary purposes, such as for buying feeds, fertilizers and seeds, and for paying operating expenses. The loan cannot exceed \$750, nor continue more than nine months.

These societies operate under a law of Denmark of 1898. The government provided an original loan of about \$1,200,000 for this purpose, charging interest at the rate of three and one-half per cent. The interest collected on loans is limited to about five per cent. The government lends to the cooperative societies on the basis of unlimited responsibility of members. The members of a managing committee of a society assume the first responsibility. Lately the government has called for payment of this loan. At the present time the farmers seem to be getting satisfactory loans from banks. Such loans may run six months or even longer. At one of these banks visited four per cent. was being paid by the bank on deposits and four and one-half per cent. collected on loans of this character issued by the bank.

There are several different forms of credit societies for real estate loans. Some of these are organized for the country, some for towns, some for owners of small holdings. There is a special society for Copenhagen. Some societies serve two or more of these classes of patrons. The oldest of these societies began operation in 1851. It is said that all of the societies are based on the unlimited responsibility of members. A borrower must pay each year the interest due and a small portion of the principal, and this is so adjusted that the entire indebtedness is paid off in about fifty years. A credit society will usually loan about one-half the value of the farm, or sometimes as much as sixty per cent. A farmer wanting more funds than this may secure perhaps an additional twenty per cent. from a mortgage society and on terms which call for complete payment within forty years. Still further loan can be secured from a bank only and these cannot be secured unless at least two reliable guarantors are provided by the mortgagee. This last loan may run as long as ten years.

When application is made to the credit society for a loan it is referred to one or more experts who give opinions regarding the value of the farm offered as security. Instead of receiving cash for the loan the borrower gets bonds and places these in a bank

for sale. A society may not deal in its own bonds. The bonds issued by one of the chief societies were found to be in three classes, those paying three and one-half per cent., four per cent. and four and one-half per cent., and they were quoted on the market at 90, 93½ and par, respectively. The amortization payment which wipes out the principal in fifty years amounts to practically five per cent.

The operations of credit societies are controlled by law, and government inspectors make frequent visits to examine records. A remarkably good record has been made in regard to failures.

There are many other agricultural societies covering horticulture, insurance and other subjects. The following statement, prepared with the aid of Mr. John H. Monrad of Naerum, Denmark, contains interesting details of some of the more important of these societies, including also some briefly mentioned on the preceding pages:

#### THE ASSOCIATED JUTLAND AGRICULTURAL ASSOCIATION

Members of this Association are taken from all the Jutland local agricultural associations, and other associations which aim chiefly to work for general agricultural purposes and which have existed at least a year and have at least 150 members and receipts of \$78 in annual dues. Five per cent. of the income of each association must be paid to the treasury of the Associated Association. Individual members are also admitted on the payment of \$2.60 annually. Fifty-two dollars provides a life membership. An annual meeting of delegates is held to which each member-association sends two representatives for a membership amounting up to 500, 3 for a membership up to 1,000, 4 for a membership up to 2,000, 5 for a membership up to 3,000, and 6 for a membership of more than that. Only these, together with the officers of the association and honorary members, have the right to partake in the discussion and vote.

The officers who manage the business of the association are elected for three years at the delegate meeting and consist of ten members, one for each county, chosen by the delegates from these counties. These elect chairmen and vice-chairmen. There is a permanent committee of five, of which at least three are elected directly at the delegates meeting, while two may be elected by other associations with which the committee cooperates.

The chairmen of the committee may, without voting, take part in the meeting of the officers if invited.

There are seventy-four local agricultural associations in Denmark and four "housemen's" associations possessing a total membership of 63,000 besides the seventy personal memberships in this Associated Association. Of committees there are those on business, plant breeding, creamery, animal breeding, promoting farm bookkeeping, lectures, housemen, and transportation. The association publishes yearly the report of the delegates' meeting and that of the counselors.

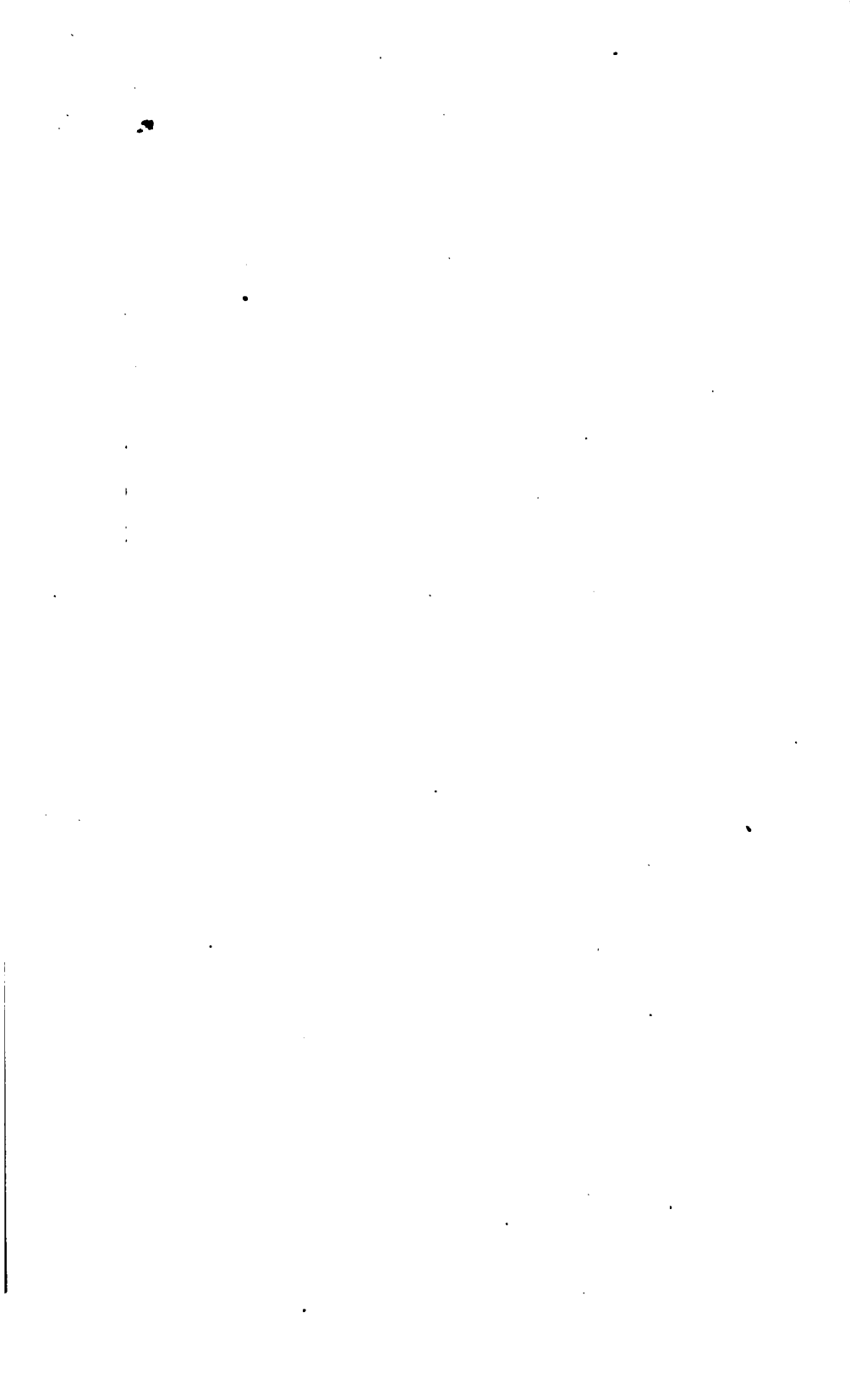
**DENMARK**



**FIG. 198. COOPERATIVE CREDIT SOCIETY, COPENHAGEN**



**FIG. 199. COOPERATIVE STORE, HASLEV**



The interest on \$13,078 is used by the association as follows: 10 per cent. is added to the capital; \$247 is used for the extended training of creamery buttermakers (male and female), feed masters (herdsmen) and agricultural apprentices. Of the balance, 30 per cent. is used for the promotion of swine breeding and dairying in Jutland, 25 per cent. for premiums at horse and cattle shows of the Jutland breed; 15 per cent. for poultry and bee culture as well as horticulture and domestic science; 20 per cent. for peat swamp cultivation; 10 per cent. for agricultural publications, and finally the interest on a small amount for Jutland bulls and on \$2,112 for agricultural libraries.

The annual budget aggregates \$45,500: the individual membership fees amount to \$182; those of agricultural associations \$1,508; and state subsidy amounts to \$43,160.

As an example of the seventy-four local district associations, Vejle Amt may be given for the larger ones. It employs a counselor in animal husbandry and plant culture and has a special committee on the latter. It has 1,900 members, paying annually from twenty-six cents to \$2.08 according to size of their property; in all, \$1,040. The capital is \$780, the state subsidy, \$1,170.

An example of the smaller ones is the Laesoe Agricultural Association, with 250 members, of which the "housemen" pay twelve cents, small farms twelve cents a Hartkorn tunland\*; in all, \$88.40. The state subsidy is \$65.

Similar associated agricultural associations are found in the Zeeland, Fyn and Lolland-Falster districts. Details of the organizations vary somewhat.

The Zeeland Associated Agricultural Association comprises twenty-three local agricultural associations aggregating 15,000 members, and has one counselor. The membership fees are \$1,768 and the state subsidy about \$4,690, the budget being \$10,720.

The Fyn Associated Agricultural Association comprises thirteen local agricultural associations with 8,800 members and four other associations and has four counselors. The budget is \$15,296, membership fees, \$1,420, state subsidy, \$6,576.

The Lolland-Falster Associated Agricultural Association has four local associations with 4,370 members and employs four counselors. The budget is \$3,752, membership fees, \$321, state aid, \$3,082.

#### HOUSEMEN'S ASSOCIATIONS

Similarly, there are associated housemen's associations. The Zeeland Associated Housemen's Association has the aim to combine the local associations in Zeeland. The officers consist of two housemen from each county and one elected at large. These elect their own chairman for two years at the time of the annual delegate meeting, to which each association may send a delegate irrespective of its number or members, and the larger ones at the rate of one delegate for every twenty members. The membership fee is four cents for each local membership. There are 205 local associations with about 12,500 members. The budget is \$1,129, the annual membership fees \$536, and the state subsidy (1911-12) \$9,936.

\* Hartkorn tunland is a quality valuation for taxation. It takes from 13.72 acres to 63 acres to make one, the average being 15.26 acres for the islands and 37.24 for Jutland or 25.2 acres for the whole country.

The Associated Jutland Housemen's Association comprises 442 local associations with 25,000 members. The budget is \$8,308, membership fees \$670, the state subsidy being, in the year 1911-12, \$616.

The Associated Lolland-Falster Housemen's Association comprises twenty-four associations with 1,592 members. Membership fees are five cents, totaling \$85.

The Fyn Association comprises 136 local associations with about 5,000 members. Membership fees are from twelve to forty cents; in all about \$804. The state subsidy is \$817.

The Associated Housemen's Association of Bonholm has fifteen local associations with 966 members. Membership fees of the associated association are twelve cents to twenty-six cents; in all \$250. The state subsidy is \$196.

#### THE ASSOCIATED JUTLAND CREAMERY ASSOCIATION

The purpose of this association is to combine the various local creamery associations in Jutland and watch the interests of the creamery industry there. A membership fee of sixty-seven cents a million pounds of milk handled is collected. There is an annual delegate meeting for which the local associations elect one delegate for every seven creameries. Besides this, every creamery may send a delegate, but he has no vote. At this meeting such matters as management are discussed. The delegates elect the officers, a chairman, a vice-chairman, a treasurer-secretary and two auditors for a term of two years. A representative body consisting of the chairmen of the local associations and the officers of the Associated Association manages the business. All the thirteen local associations in Jutland, representing 589 creameries, participate at this meeting. The association keeps a dairy counselor (instructor) and publishes an official organ, *The Cooperative Journal*. The budget is \$3,752, the membership fees \$1,474. The state subsidy of \$804 pays the counselor; \$402 is given to promote good milking.

The Associated Zealand-Lolland-Falster Creamery Association comprises seven local associations on the islands named, aggregating 203 creameries.

#### LOCAL CREAMERY ASSOCIATIONS

There are in all twenty-one creamery associations (representing 940 creameries) receiving \$6,740 in membership fees, and seven of them run cooperative milk scoring associations. As an example of these associations, Frederiksborg Creamery Association, with twenty-two members, who pay fifty-three cents for each million pounds of milk produced; in all \$265. Or Aalborg, representing sixty-six creameries and a \$2.50 fee a million pounds of milk, or a total of \$536.

The aim of these associations is to improve the dairy industry by holding the so-called pail shows and sometimes larger shows and lectures, as well as discussion meetings, by procuring material to show details in creamery work and prices paid for butter, and by buying supplies at wholesale. Each creamery is represented and shares in electing the officers and chairman of the association.

Milk scoring associations are combinations of creameries which have the aim of securing better and cleaner milk. The association engages a milk

judge who, together with the buttermaker, scores the milk and reports result to the patrons and gives suggestions on how to improve the milk. The work is supervised by representatives of the creameries. The expenses are prorated according to the amount of milk. In some cases these scoring associations are identical with the local creamery association.

#### INTERNATIONAL DAIRY ASSOCIATION — DANISH BRANCH

This organization was established in 1906 and now comprises eleven local associations representing about 5,600 members, and ten personal membership companies. Companies and associations pay from \$6.70 to \$26.80; individuals \$2.68 as dues.

#### NATIONAL DANISH BUTTERMAKERS' ASSOCIATION

This association is composed of creamery buttermakers (managers) who are also generally cheesemakers, and its aim is to develop the dairy industry generally and the perfecting of and holding together of all dairy workers. The directors number seven, two of whom are chosen at the annual meeting of delegates. The chairman (president) is also elected by the delegates, but the vice-chairman is chosen from and by the directors. The association is divided into twenty-six local (district or "amt") associations, each with their own officers, who under the by-laws of the association manage their own affairs. The meeting of delegates is held alternately in Copenhagen, Odense and Aarhus, and each local association elects a delegate for every ten members or fraction thereof.

At the delegate meeting dairy problems are discussed and the directors elected. The organ of the association, *The Mælkeritidende*, is sent to the members free. The editor is also the secretary. The association has a counselor in cheese making and casein production.

Anyone who makes a living by the dairy industry is acceptable as a member. The annual membership fee is \$1.07 and to the sick fund \$1.34 annually, or \$21.80 for a life membership. In 1907 a capital and annuity insurance was started with 537 members and a capital of \$52,088.

The interest-bearing capital of the association is \$5,360, the sick fund \$16,348, and the annual budget about \$3,752. The state subsidy (1911-12) was \$804 and used for cheese experiments.

The local associations vary in size from eleven members for Samsø to 156 members for Odense, aggregating 1,832 in all.

#### THE NATIONAL DANISH BUTTERMAKERS' ASSOCIATION ACCIDENT INSURANCE ASSOCIATION

This association was organized in 1893 and has 453 members with a capital of \$7,236. The annual premium for \$236 at death is twenty-two cents; for the same amount at incapacity, the annual premium is sixty cents; or for an income of twenty-seven cents daily, when incapacitated, the annual premium is thirty cents.

**THE ASSOCIATED DANISH CREAMERY ASSOCIATION'S BUSINESS COMMITTEE**

This committee consists of three members, namely, the chairmen of the Associated Jutland Creamery Association, the Fyn Creamery Association and the Associated Zealand-Lolland-Falster Creamery Association. Its aim is to discuss the questions to be taken up at the annual meeting of delegates or the meetings of representatives of the association, to increase the influence of these by securing action in union, and to represent all the associations which belong to the associated creamery associations. The three members of the business committee alternate as chairman. Two meetings are held annually, usually in Odense. Resolutions are only binding when adopted unanimously. There is a secretary, located in Odense, and a counselor in boiler management (firing). The state subsidy is \$1,072 for pail shows in the local associations.

**THE UNITED ASSOCIATION OF THE DAIRY INDUSTRY**

This organization submits recommendations to the Department of Agriculture regarding creamery supervision according to the law of 1911 applying to trade in butter and agricultural products. The organization which consists of sixteen members, who choose their own chairman, is formed as follows:

Three members are elected by the Associated Agricultural Association, three by the Associated Housemen's Association, three by the Danish Butter Trademark Association (now dissolved and turned over to Department of Agriculture), three by the Associated Danish Creamery Association, three by the National Danish (Creamery) Buttermakers' Association, and one by the Associated Danish City Creamery Association.

**THE COMMITTEE FOR ASSOCIATED CHEESEMAKING TESTS**

This committee has charge of the cheesemaking tests and shows organized by the National Danish Buttermakers' Association in various districts, whereby it is aimed to improve the cheese by exact daily records in the participating factories as to the methods used in making and curing. It further arranges an annual cheese competition. The committee consists of one member from each of the participating district associations and the chairman of a committee on cheese experiments on Zealand. Each member arranges the show in his own district. There is a secretary, and the permanent judges are the Chief Assistant of the Royal Agricultural Laboratory and the cheese counselor of the association.

**THE CREAMERY STATISTICAL COMMITTEE**

Established in 1903, this committee collects material on butter prices and creamery management and statistics, and has charge of matters relating to the Copenhagen butter quotation. The committee consists of nine members, of which three are elected by the Associated Danish Creamery Association, two by the National Danish Buttermakers' Association, one by the Danish Butter Trademark Association (now dissolved), two by the Associated Danish Agricultural Association, while the dairy counselor of the Royal Agricultural

is the ninth member. They act for three years and appoint their chairman and vice-chairman annually. A clerk approved by the Department of Agriculture edits the statistics.

Butter price statistics were started many years ago on the basis of information from about 700 creameries as to the actual price paid. On this the average is figured out and used in fixing the top price on at the Copenhagen bourse.

Creamery management statistics were commenced in 1898. They are based on annual statements of the creameries, which are sent through the local creamery association and give all details of working methods, apparatus and financial results. The state aid in the year 1911-12 was

#### THE BUTTER QUOTATION COMMITTEE FOR COPENHAGEN

The committee consists of eight members elected for one year at a time, four from the Associated Agricultural and Creamery Association, two from the Butter Exporters' Association as representing the provincial members, and two representing the Copenhagen members elected by the committee of Merchants' Association. Its chairman is the chairman of the quotation committee, which receives weekly reports from the exporters every Thursday, and also the report from the butter price statistics of the creameries.

#### THE ASSOCIATED JUTLAND HORSE-BREEDING ASSOCIATION

Established in 1888, this association aims to promote the breeding of horses in Jutland. Any horse-breeding association in Jutland may become a member by paying four cents a member (of the local association), yet not more than \$2.68 nor more than \$6.70. The association is managed by a representative committee, consisting of the chairman in the local association, and an annual meeting, electing a chairman and a cashier who, in connection with a member appointed by the Associated Association of Jutland Agricultural Associations, form the directors. Two hundred and two Jutland horse-breeding associations, with 21,000 members, and 200 stallions, are included. The annual budget is \$1,340, and the annual membership fees about \$804.

#### CENTRAL MANAGEMENT OF CATTLE-BREEDING ASSOCIATIONS AND CONTROL ASSOCIATIONS (COW TESTING ASSOCIATIONS) IN FYN

This organization was established in 1893. It aims to promote the development of Cattle Breeding and Control Associations in Fyn and to watch the results of these associations. A directory of seven chooses its own chairman who is a member of the directory of the Associated Agricultural Associations in Fyn. The secretary is also counselor for the Control Association. Besides him, there is another counselor for the Breeding Association. It comprises 118 breeding associations, with 2,674 members (herds), 129 control associations in 123 divisions, with 3,015 members and 41,916 cows. The associations pay a fixed membership fee of

There are other similar associations in Zealand and Fyn (one for the special district of Frederiksborg), comprising in all forty local associations, with 1,900 members, and forty-seven stallions.

## THE ASSOCIATED JUTLAND CATTLE-BREEDING ASSOCIATION

This organization follows the usual aim of such associations in aiding and combining the local associations, by employing counselors, taking part in shows, keeping herdbooks, and doing other like things. Under this central association, run by representatives from the local breeders and agricultural associations, are grouped seventeen district associations, comprising 739 bull and breeding associations, with 866 bulls, and 138 control associations, with 5,660 herds, aggregating some 90,000 cows. The Rinkjobing is an example of a large district association. It comprises eighty-five local breeding associations, with 2,600 members and 111 bulls, twenty swine-breeding associations and twelve control associations, with 270 herds and 3,700 cows. The contributions of the cattle-breeding association is ten per cent. of the state subsidy and five per cent. of that of the swine-breeding association and test association. The State subsidy for a counselor is \$187.60 annually. One of the small associations is that of Thisted, comprising twenty-five local cattle-breeding associations, with 765 herds and twenty-six bulls. The local association contributes about four dollars, and the state subsidy is \$42.88 towards the salary of the counselor.

## OTHER GENERAL ASSOCIATIONS

The Associated Association of Zeeland, composed of cattle-breeding associations, comprises seven cattle-breeding associations and 277 bull associations. Members contribute six cents to the central association and receive the official organ free. The annual budget is \$536. The membership fees amount to \$250.20; the state aid amounts to \$214.40 towards publishing the paper. One general counselor is employed and seven local counselors. They aggregate 280 local associations with 3,507 herds and 317 bulls.

The Associated Lolland-Falster Cattle-Breeding Association comprises thirty-eight local associations, with 620 herds and 47 bulls. The annual dues are \$2.68. The organization is a good deal like that of the Jutland association.

The Associated Zeeland Control Association has six directors elected at a meeting of the chairmen of the local associations. It employs a counselor and comprises 134 control associations (cow test associations), with 2,963 herds and 58,115 cows. The contribution is twenty-seven cents a herd, in all \$1,728.60. State aid for a counselor is \$294.80.

The Bonholm Associated Control Association comprises seventeen local associations, representing 238 members and 4,609 cows. Contributions to the association, \$4.02 from each local association.

The Central Management of the Control Association in Jutland is in the hands of the committee on farm bookkeeping of the Associated Agricultural Association. On Lolland-Falster it is in charge of the committee on cattle breeding and the control association of the Associated Agricultural Association. It is comprised of forty-two associations representing 804 herds and 19,105 cows.

The Associated Swine Breeding Centers and Swine Breeding Association of Jutland has an annual delegate meeting of the local associations; sixty swine breeding centers and forty-five swine breeding associations which pay \$1.07 and fifty-three cents respectively. Similar organizations on the island of Fyn comprise eleven swine breeding centers and thirty associations.

sheep breeding association comprises thirty-eight associations, with 304 and thirty-eight rams in Viborg, and eight associations with sixty-five and eight rams in Fyn.

Jutland-Fyn cooperative slaughterhouses have a joint committee on unions, which are published every Tuesday and Friday.

#### THE LOCAL ASSOCIATIONS

Local agricultural associations aim to promote the general development of agriculture by lectures and discussions, by shows, by local field experiments, and local special associations. They may receive state aid for paying counselors, for premiums at live stock shows, plant experiments, etc. No association with less than 150 members and about \$80 annual fees may get subsidy for live stock premiums, and this must never exceed in a unit twenty-seven cents (the value of a kroner in American money), four times the number of the members. Applications are made through the central association to the secretary of agriculture before the end of March. Subsidy for counselors in animal husbandry must not exceed two-fifths of salary paid the previous year. Counselors in plant breeding are paid the subsidy for that purpose.

The number of these associations are 116, with 89,800 members and an annual membership fee fund of \$56,102. The state subsidy for the year 1912 was \$4,824 for animal husbandry counselors, \$26,800 for premiums at live stock shows, and \$16,080 for plant breeding; in all, \$47,704.

Control association (cow test association) work often comprises not only testing of cows but also the rent value of raising stock and hog fattening. In a few cases even the field and crop accounts are included. These associations may receive state aid when there is not less than eight members and 100 cows. Cattle breeding associations with at least 150 cows may also receive aid if they test their cows. In 1911 there were 521 associations receiving aid, and the subsidies aggregated in the year 1910-11, \$32,160.

Cooperative creameries numbered at the beginning of 1912, 1,177, besides individual or stock creameries and eighty-five estate creameries.

Cooperative slaughterhouses number 41; there are besides twenty-two dual or stock companies, eight of these collecting eggs for export.

There was one cooperative sugar factory running in 1912 and another opening that fall. Seven other factories are stock companies and run in a similar manner; shares in these factories were selling at \$260.

#### ASSOCIATIONS FOR PLANT CULTURE

There are four associations for sugar beet growers, aggregating 742 members, paying fees of four cents a tunland (about 14 acres). There are three associations for growing root seeds, with eighty-four members, and one association of root seed merchants.

There is a North Jutland seed breeding association, known as "The Danish Agricultural Association Seed Provision," comprising some fifty-five agricultural associations and some housemen's associations aggregating about 850 members, and a seed area of 4,700 tunland (65,800 acres), and four similar associations aggregating 1,850 members and employing four counselors.

## SUNDRY ASSOCIATIONS AND PRIVATE ENTERPRISES CONNECTED WITH AGRICULTURE

There are eight agricultural lecture associations aggregating 866 members. Besides these, agricultural lectures are often provided by the general parish lecture association.

The Associated Danish Horticultural Association, comprising the Royal Danish, the Jutland and the Island's Horticultural Associations, aims by cooperation to promote union in the efforts to improve horticulture in Denmark. The officers are the chairman, the secretary and a third officer of each of the associations named, and they elect their president. An organ, "The Garden," is published by the association. The state subsidy was in the year 1911-12, \$4,154.

The Royal Horticultural Association, composed of 1,200 members, owns a capital of \$2,224 and receives annually about \$2,948 in membership fees. Its state aid was \$4,556 in a recent year.

The Jutland Horticultural Association, with 982 members, has a capital of about \$4,931.20, and receives membership fees of about \$804 and a state aid of \$2,502.

The General Danish Gardeners' Association has about 2,600 members, paying \$1.60 annually, and owns a capital of \$10,184.

The Island's Horticultural Association has 9,200 members paying \$2,636, and receives \$2,502 state aid.

The Fyn Horticultural Association has 100 members, each paying twenty-seven cents annually.

The Danish Heather Society helps to improve the heath of Jutland by irrigation, by tree planting, by improving the roads and locating marl pits, and offers free advice as to planting and bog culture. There are 5,500 members, paying at least \$1.07 annually, or \$26.80 for a life membership. Various committees have charge of the various activities; the society owns 11,621 tunland and oversees 130,279 tunland. The annual income from members is about \$5,628, and from capital, savings banks and parishes \$2,948, while the state aid for the years 1911-12, was in all \$50,544 for the property of the society, and \$69,502 for other properties under its supervision.

The Heath Culture has 4,815 members in 142 local associations, and eighty-two branch associations. The annual membership fees aggregate \$1,393. The state aid in 1911-12 was \$30,820.

The Associated Plantation Association is interested in planting shelter and hedges and small plantations about the farms and houses, and represents fifty-five plantation associations which elect a representative for each five associations. The membership fee is twenty-seven cents.

The Danish Wind Electricity Association has a membership of about 300. The fees of \$1.07 are used to aid in putting up windmills for the production of electricity on the farms and to pay for expert advice.

The Danish Forest Association has about 400 members, and charges fees of from \$1.60 to \$5.36, according to area of forest owned. Foresters pay \$2.14; others owning no forest, \$1.60. It employs three counselors in forestry.

The Danish Hunting Association has about 2,100 members. The fees are at least \$1.07. It publishes a paper and aims at enforcing game laws, and

ducted like all other associations organized on the basis of local associations.

Danish Butter Branding (Trade Mark) Association had twenty local associations and 1,327 creameries as members, but the trade-mark is now turned over to the government and the association dissolved.

#### BUYING AND SELLING ASSOCIATIONS

Buying and Sales Associations for Agricultural Products are associations developing as much as possible direct sales to consumers and reducing sales expenses. There are besides these associated associations mentioned many small associations.

Central (Associated) Association of the Cooperative Stores comprises 1,300 cooperative stores. The capital is \$187,600 and the reserve fund \$857,600. The yearly circulation (sales) is about \$12,328,000. There is a special branch for buying seed cooperatively which handles about 1,000,000 pounds of seeds valued at about \$603,000.

"Central" is a special agricultural cooperative stores association. The members agree to take at least one share of \$5.36, for which they are responsible. One representative is elected for each 1,000 shares. Its membership is about 5,000 and its capital about \$91,388.

Jutland Cooperative Association for Buying Feedstuffs comprises 608 local associations and about 34,000 members. Its annual business is about 100 million pounds, valued at \$5,038,400.

Island's Association for buying feedstuffs comprises local associations and creameries agreeing for five years to buy their feedstuffs through the central association and guaranteeing fifty-three cents a cow, but not less than \$134. There are eighty-five local associations with about 3,900 members. The guarantee is \$19,832. The circulation was about \$1,072,000 in one year. Similarly there are ten smaller central associations and combinations of local associations for buying not only feedstuffs but such things as fertilizers and so on. They guarantee to buy all they need for five years, and the members aggregate about 20,000 in 299 local associations; the circulation amounts to \$4,681,424.

The Danish Cooperative Fertilizer Association, comprising about 670 local associations, has a circulation of about \$670,000. The local associations guarantee to buy and pay for all their needs.

The Jutland Cooperative Agricultural Association for Buying Commercial Fertilizers has 3,400 members. This organization has no solidarity, but has a capital of \$1,608; its annual business is 2,500,000 pounds.

The Jutland Cooperative Association for Utilizing City Manures is composed of seventeen local associations of 500 members.

The Viborg District Association for Buying Commercial Fertilizers has 642 individual members and twelve local agricultural association members. Single members pay one and one-fourth cents per tonland to start with, and \$2.68 for each local agricultural association or a creamery.

The Danish Cooperative Association for Buying Agricultural Machinery has a guarantee from each member for \$2.68 or from a local association for \$10. It comprises 150 local associations with a large number of members.

**DANISH CREAMERY COOPERATIVE BUYING ASSOCIATIONS AND MACHINE FACTORY**

This association is composed of nineteen "circles" of not less than ten creameries; about 835 creameries are members, each guaranteeing an amount as much as \$250, in all \$90,316.

Its annual business is about \$450,000. One representative is elected for each circle.

**OTHER MISCELLANEOUS ASSOCIATIONS**

Cooperative Butter Export Associations number six with an export of \$9,447,000 annually from some 185 creameries.

Cooperative Cattle Export Associations, exporting live stock and meat, include seven associations aggregating 5,453 members exporting about \$927,280 worth annually.

The Cooperative Danish Egg Export organization of 550 circles and 45,000 members has a reserve fund of \$80,400. Its yearly business in eggs and poultry is about 9,000,000 pounds, valued \$1,206,000.

A Cooperative Potato Export Association exports potatoes valued at \$6,700.

The Association of Milk Producers near Copenhagen is composed of 250 members owning about 10,500 cows. The membership fees are four cents a cow besides the entry fees of from fifty-three cents to \$1.07 for twenty cows and fifty cows respectively.

The poultry, fishery and domestic industries also have their local and central association.

**AGRICULTURAL SCHOOLS**

There are twenty-three agricultural schools in Denmark, of which three are dairy schools and twenty-nine "Folk high schools" having agricultural courses. There are thirteen domestic economy schools. All of them are private schools receiving state aid amounting usually to from \$268 to \$1,072 (one gets \$2,278). State aid is also given students taking courses. One agricultural school for deaf mutes is in existence.

#### IV ENGLAND

The British government is showing great interest in the development of agriculture. It makes appropriations to promote the organization of farmers, has enacted laws to facilitate this work, and has sent a well-trained investigator, under the employment of the Board of Agriculture, abroad to study organization in other fields. This study in Germany alone occupied about two years of the investigator's time.

Increased aid is being given to agricultural schools and colleges. The government provides experts for these different institutions, whose business it will be to study agriculture in the respective districts. There are twelve such districts, each with its agricultural educational institution. About \$5,000 is allowed for each of these to use in strengthening its staff to deal with local problems. Scholarships have been established for the purpose of training young men in agricultural research, thus hoping to produce better trained experts for these positions. Research work is receiving increased support from the government and schemes for enlarging work through farmers' institutes are now receiving favorable attention and with promise of liberal support. One of these plans would provide headquarters for the residence of local agricultural workers.

The great impetus in favor of better agriculture in England is largely due to the quiet work of educational institutions over a period of many years, the interest of substantial men who realize the importance of the subject, and — more recently — to the establishment of a development fund which amounts to \$2,500,000 annually and which is to be expended under the direction of a body of independent commissioners known as development commissioners. To this body all applications must come, even from the Board of Agriculture, for the allotment of funds and approval of schemes for betterment. In 1909 the entire grant handled by one of the principal officers of the board in the interest of agricultural education was approximately \$60,000. The corresponding fund for the year 1912 was nearly \$750,000. All subjects

of agricultural interest may be considered and apparently may be supported from this fund, including propaganda work in favor of cooperative buying, selling and insurance societies. The agricultural development act had the sanction of both political parties. A chief reason why the government, through this act, wishes to assist in the organization of farmers is that they see agriculture has fallen behind commerce and they recognize the danger of the continuance of these tendencies.

#### BRITISH DAIRY FARMERS' ASSOCIATION

This old association has rendered a highly valuable service. Its objects are the improvement of dairy stock and dairy produce. The association encourages the breeding and rearing of superior dairy stock, an increased production of better cheese, the erection of better dairy buildings, the invention of improved dairy equipment and scientific apparatus, and the holding of dairy shows which are profitable financially and instructively. It also encourages improvements in poultry husbandry. A journal is published which contains articles on different phases of dairy farming and manufacturing. Conferences are held from time to time in different dairy districts and educational lectures are given. The association holds a dairy show annually in London and at this show prizes are awarded to the value of about \$15,000. Its headquarters are in London.

Members of this association are selected with considerable care. They pay annually about \$5.00, except tenant farmers and dairy instructors, whose annual fee is about one-half the regular fee. Privileges enjoyed by the members include a copy of the "Journal," free ticket to the shows held by the association, and the privilege of consulting the chemist, botanist and veterinary surgeon of the association, such professional service being rendered at a special reduced rate. This latter arrangement is one which is much appreciated by members of the association. They may, for example, wish the advice of a botanist concerning plants or seeds. They know that through their association they may secure reliable advice at low rate. The botanist's schedule of prices shows that he will render a report on the purity, amount and

of foreign materials in a sample of seed for about twenty cents; or a report on the purity and germinating power of seed at a similar low price. Other services which the botanist is prepared to render are listed, as are also services and rates of fee by the veterinarian, chemist and bacteriologist.

The society has affiliated organizations which are given the right of representation in the governing council. At the present time the society is making efforts to devise a new milk record book, and for this particular problem financial aid has been obtained from the government. It is desired to make a milk book which may serve to bring uniform reports from different individuals and organizations.

The society makes contribution toward the expenses of the Rothamsted Institute at Reading and is represented on the committee of management in charge of the institute. The Reading institute is equipped for receiving milk and manufacturing it into various dairy products. A large number of students have been studying there since 1896. The institute has been changed from the management of the Dairy Farmers' Association alone to the management of this association and University College, so that students of the institute may secure more complete scientific instruction with the equipment of the college.

An interesting feature of the work of the Dairy Farmers' Association is its excursions. Each year an excursion is conducted to some distant point of dairy interest, and usually 100 persons make the trip. These parties in different years have visited Holland, Scotland, Denmark and Sweden. Generally the visitors are absent about ten days, each member paying his expenses on the trip.

The business affairs of the association are managed by a council, one-third of the membership of which changes annually. This council consists of thirty-six elected members and others representing affiliated societies. Financial statements show an income of about \$5,000 for general purposes, most of which is received from membership fees. Five hundred dollars is contributed to the Rothamsted Institute at Reading, and about \$1,700 is paid for salaries. The dairy show brings an income of about \$36,000.

## ROYAL AGRICULTURAL SOCIETY OF ENGLAND

The English Agricultural Society was incorporated as the Royal Agricultural Society of England in 1840. The objects of this society, as originally stated, were to publish reports of practical agricultural experience which would be useful to farmers; to secure by correspondence with agricultural and scientific societies information of benefit to agriculture; to conduct experiments on farms with a guarantee to the farmer against losses incurred in such work; to encourage scientists to develop improvements in agricultural implements, in the construction of farm buildings and cottages, in the application of chemistry to agriculture, in devising methods of destroying injurious insects and finding better methods of weed eradication; to promote the discovery of new varieties of grain and useful vegetables; to collect information regarding the management of woodlots, plantations, and all subjects relating to rural improvement; to assist in developing measures for education in agriculture; to stimulate improvement in veterinary science; to encourage the growth of superior farm products by distribution of prizes; and to promote the comfort and welfare of farm laborers. A supplemental charter was granted in 1905, when the society was thoroughly reorganized and certain inactive and out of date features were eliminated.

This society occupies its own excellent building, on Bedford Square, London. Membership fees vary from about \$5 to \$25 annually. The affairs of the society are managed by a council which meets monthly except in the summer. There are seventy-five members of the council and they pay their own expenses to the meeting in London. Two general meetings for members are held each year, one at the time of the annual show and the other in December. There are about 10,000 members, but the December stockholders' meeting is attended by comparatively few. The members receive free a journal, which is a volume of about 500 pages filled with articles on the society's activities; farm methods; statistics as to rainfall, crop production, agricultural exports and imports, acreage in crops, prices, and other such useful information. Other benefits of membership include free admission to the society's show and grand stand, free use of its library and

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**FIG. 200. ROYAL AGRICULTURAL SOCIETY HEADQUARTERS, LONDON**



**FIG. 201. LIBRARY OF THE ROYAL AGRICULTURAL SOCIETY, LONDON**





reading room, reduced rates on entries in the show, and services at reduced rates of experts in chemistry, botany, zoology, and veterinary medicine. Thus members may secure advice upon the purchase of fertilizers and feeding stuffs, or analyses of samples; information on the purchase of seeds, with instructions as to best time and manner of ordering; expert examination of samples; information concerning pests of farm crops and animals; and veterinary service. The society sends a confidential letter to members giving the names of firms that are found guilty in selling adulterated goods and they advise members as to firms deemed reliable and worthy of patronage. These last-named benefits are much appreciated and must be of high value.

The show of the Royal Agricultural Society is a great event in English agriculture and represents the chief work of this society. It is said to be the largest market in the world for some strains of pure-bred live stock. It is always held late in June or early in July and continues for five days. The show is migratory, going to different places on invitation. The city or town visited provides about \$10,000 toward expenses and also contributes about as much more toward the prize fund, while the society contributes from its own treasury about \$12,000 toward the show. Although a large amount is awarded as prizes, even exceeding \$50,000, there is usually a surplus, and this has been accumulated in recent years and now amounts to nearly \$225,000. The average number of persons admitted to these shows is about 125,000, but in some years it exceeds 200,000.

Livestock constitutes the chief exhibit, there being nearly 3,000 head shown; machinery is next in importance, with about 5,000 implements entered. Inventions deemed to have special merit are awarded silver medals, and machine exhibitors are requested when entering to state if they have machines for consideration in this connection. Judges at the show are accompanied by experts and give special attention to new inventions and improvements. Generally there are from fifty to seventy entries of new machines and only two or three medals of special recognition are awarded. All machine exhibitors pay an entry fee.

In connection with the show, prizes are given for work done on farms. In this class entries close about December the third. In-

spectations are made in February, April and June. The farm prize competition is usually limited to the territory in the vicinity of the place where the show is to be held. These contests cost about \$2,500 annually for expenses and the same amount in addition for prizes. First prizes are about \$500. Horse shoeing competitions are conducted, with a total prize fund of over \$400, first prizes being about \$5.00. There are also butter-making competitions, sheep dog trials, and horticultural exhibits.

The tests of agricultural machines seem to be conducted in a manner to result in considerable benefit. For example, the society reports a trial of potato diggers and sorters. The first prize offered was \$100, the second about \$50. Fourteen machines put in an appearance on the appointed day. The manner of conducting the test was fully described and faults of the machines indicated. After the contest a report covering the best features of the winning machine, with its photograph, is published. Some of the other machines also are pictured in the report, with comments on their better features.

#### LIVESTOCK SOCIETIES

Owners of the important breeds of livestock maintain organizations, with permanent headquarters, many of them being located in London, their purpose being to advertise and otherwise advance the interests of their own breeds. They give considerable attention to exhibiting animals in local and larger shows.

#### THE AGRICULTURAL ORGANIZATION SOCIETY

This body, which operates in England, is similar to the organization with a corresponding name in Ireland. For many years different organizations somewhat of the character of this one had followed one another without much success. They were supported by voluntary donations, a wealthy and sympathetic land owner frequently giving from \$2,000 to \$2,500 for the support of the cause. About 1900 the society of the present name was organized, and recently it also has passed through a process of reorganization. In its early history it existed entirely on voluntary gifts, until the government recognized the society by allowing it to assist in

ing the so-called Small Holdings Act into operation, and in its service the government paid the society as much as it could through its subscription list, but not to exceed about \$8,000. The society does not engage in trading, but exists primarily for the purpose of promoting cooperation among farmers. Its representatives give advice and assistance in the organization of properly registered cooperative agricultural societies in suitable districts throughout England and Wales. Societies which have been organized become affiliated with it by the payment of a subscription and this entitles them to special benefits.

The recent organization was under section 20 of the Companies Consolidation Act and has been accomplished on the terms of the Development Commissioners and the Board of Agriculture, and it thus became the accredited body to carry out one of the main purposes of the development act,— agricultural cooperation. In 1920 it was receiving about \$37,000 a year from the government. In 1921 it will receive a permanent annual allowance as recommended by the Development Commissioners.

The society has about 500 members paying \$5.00 or more a year.

These members have practically no privileges except to borrow and receive literature. They continue their membership as a matter of course of their public spirit. Officers of the society include prominent business men and politicians of both parties.

In the future the society is to be managed by a number of governors, eighteen to be elected by the society with due recognition of affiliated societies, twelve to be appointed by the government, two by the Board of Agriculture and Fisheries, two to be appointed by the County Councils association, two to be appointed by the Agricultural Union, and two selected by the governors. The number of governors may be changed, but it is provided that those elected shall be not less than half of the full membership and those appointed by the Board of Agriculture and Fisheries not less than one-third.

The work of the society may be divided under four heads:

**Propaganda.** This includes sending out reports and leaflets concerning the activities of the society, and containing useful agricultural information. It includes also the work of lecturers

who discuss cooperation in districts where they have been invited to go. Usually these lecturers are staff officers and committee members and they work without extra pay, but there are also some paid organizers on whom much of this kind of work falls. Experts on cooperation are continually employed in the head office in London to attend to correspondence.

2. Organization of societies. This follows the preliminary work. A model set of rules is offered to the new society and when adopted must be registered with the government. Instruction is given as to methods of keeping required records. Much advice is given to new societies upon matters of administration.

3. Assistance to societies. Frequently a local society is in need of advice and this is furnished by experts who make visits or conduct correspondence. Annual meetings of local societies are attended. A great deal of advice is given also to local societies concerning legal questions, the enforcement of rules, purchase of supplies, disposal of products, and advantages or dangers of possible local enactments.

4. Schemes for linking societies having similar interests are being studied and slowly worked out. In this manner questions are successfully handled which concern all the membership, but are too difficult for a small local society to handle alone; such questions, for example, as railroad rates and service. Some interesting examples of service of this latter kind were noted. The society assisted certain societies to secure a separate and more favorable rating for cucumbers when shipped in a certain manner which would permit distribution to many cities, instead of wholesale shipments to London only, whence dealers had been distributing to other places. Another effort resulted in the establishment of a cooperative creamery, the parent organization remaining in touch with the work until a manager had been secured and success seemed to be assured. And in another instance combined efforts, guided by the society, resulted in an improvement of seeds being sold in a large community. Frequently concessions have been secured on prices of fertilizers amounting to \$3.00 to \$4.00 per ton and liberal concessions have been secured also on clover seed and certain other articles which farmers purchase in quantity.

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FIG. 202. FARMERS' SHEEP MARKET, IPSWICH



FIG. 203. FARMERS' CATTLE MARKET, IPSWICH



Organization Society has had a wholesome growth. It had thirteen societies in 1901, and as many as 126 in 1908. A large number formed by or affiliated with the society in 1912 numbered 500, with a membership of over 30,000 persons and transactions amounting to about nine millions of dollars.

The largest number of societies are organized in the interest of the development of small holdings. Provision has been made to assist societies formed of persons who are operating small areas of farm land. These persons are taught the science of cultivation and shown the advantages of helping one another in joint purchases and sales and the joint use of some agricultural implements, and even horses.

The next largest number of societies are those for the purpose of buying and selling for the farmers. Other societies are devoted to dairying, agricultural credit, poultry and eggs, insurance, and other activities.

#### THE EASTERN COUNTIES COOPERATIVE ASSOCIATION

A visit was made at Ipswich to see the operations of the Eastern Counties Cooperative Association. This association was formed by the Organization Society and it appears to be in a prosperous condition, having about 1,000 members. It does everything the farmer needs for agricultural purposes, such as buying ironware. Prices asked by this association are about the same as in the open market. Prices in general are said to have fallen to a low level by reason of the activity of this association. There is no rule requiring members of the association to trade only with it.

A seed department is operated, with an expert in seed selection. He estimates the requirements of the members and purchases seeds in quantity well in advance of their use. He uses a seed selector and examines samples by microscope and other means. The members of the association are thus protected by an expert in seed selection of their own. Arrangements are made with certain seed companies whereby, for a small additional price, they grow root crops for the association's sales. A committee of members makes selection of the root crops while they are growing for seed purposes.

poses, to assure themselves that the plants are in good condition and kept free from obnoxious weeds. Clover seed is handled in the same way. As this happens to be a large clover seed producing district, the society handles the seed for its members and even exports direct to America and the European continent. It imports alfalfa and alsike clover seed. In 1912 it distributed about twelve tons of alfalfa seed to its members, and about 100 tons of clover seed. Members are encouraged to bring their seed to the headquarters of the society to have it cleaned at lower cost than is possible elsewhere.

Official seed testing is not conducted in England. Private experts make tests at a high rate of charge. These facts explain in large measure the popularity of the work of this association.

A large quantity of feeding stuffs is handled by the association also on a narrow profit margin. Linseed and cottonseed oil cake are imported by the shipload. The needs of the members are estimated to within a few hundred tons and orders are placed several months in advance of final distribution. This feed is handled in a large warehouse belonging to the members. A mill is operated so that feed may be reduced to the most convenient form for use.

At one time an entire cargo of Scotch seed potatoes was brought to Ipswich for members of this association. In this way, individual farmers were saved over ten cents per bushel.

Several thousand tons of fertilizers are handled which are tested by the association. This is purchased from the largest fertilizer companies and includes special mixtures of such composition as the members of the society may order. These may be delivered in quantities of two or three thousand tons. Members are advised which fertilizer is best to use; for example, on a heavy or light soil and for different crops. Large quantities of fertilizer ingredients are handled separately.

The sales of machinery and hardware amount to about \$125,000 annually.

About 5,000 tons of coal, including steam, house and kitchen coal, were purchased for the members in one year.

Potatoes and other farm products are sold for members.

egg department occupies a separate building in Ipswich, and handles about 3,000,000 eggs per year. Collectors call at homes of members at regular intervals and their collections are brought to twelve different egg-receiving stations which are located near the railroad station. Here they are tested, graded and packed according to color, size and weight, and shipped to the London market. These eggs go forward without distinguishing marks. Producers receive no pay for bad eggs and may be compelled to pay a fine for delivering them. In conformity to the practice in some other places, the members are obliged to sell their eggs to the society, but most of the eggs collected by the members go to the society during the summer.

This is not the case with numerous members during the winter when they have their own special outlets, although the society then pays as high as four cents per egg. The eggs are sold monthly though the society has some agents who buy from non-members, paying cash on delivery. Agents receive fifty cents per thousand for buying and forwarding the eggs to a central station. Those agents who collect, test, pack and ship, receive about \$1.25 per thousand. The central station pays about fifty cents per thousand for retesting, packing and forwarding eggs which are received from other centers.

The society acts as insurance agent for various companies, paying the usual agents's commission and sharing this with its members. Its chief business of this character is in fire insurance, but it also conducts insurance for workmen's compensation on account of accidents, and some life insurance.

The trade committee of twelve members, who receive expenses and salary and are responsible for the conduct of the business, is elected by the society and meets every Tuesday. The meetings are also attended by managers of the different departments, who render reports and receive instructions.

The shares in the society cost each member about \$1.25, and these are taken at the rate of one for each ten acres of land owned. In 1902 only one-fourth of the par value of the shares had been paid for. This is sufficient to provide good credit at the bank. The one-fourth paid in amounts to about \$12,000 and the bank is good for about \$35,000 additional.

The success of the association is said to be largely due to the fact that well trained men have been selected to manage the different departments. Although the association is only about six years old, it appears to be on a substantial foundation. Business is conducted on a two and one-half per cent. basis and shows a profit.

At the present time the association's business is conducted in several buildings located in different parts of Ipswich. Its interest wisely has been centered on good business methods rather than in fine-appearing structures and office conveniences. Its activities have now reached a point where it has been decided to put up one large building to accommodate the different branches. The buildings now occupied include a warehouse near the foreign shipping dock, a mill adjacent to the railroad, a clover seed store, a root-seed storehouse, an egg building and a headquarters building.

Near the headquarters of the cooperative society at Ipswich there is a cattle market which is said to fill an important need of the farmers in this section. Animals to be sold are brought to the market on a certain day. They are admitted to a pen one at a time, and as they enter the auctioneer sells them to the highest bidders and charges \$1.25 for making the sale. The weight of the animal is not stated. It is purchased by the butchers on its appearance. Under this system the person with one animal to sell is at no disadvantage as compared with those who have a considerable number.

Other cooperative societies like the one of the Eastern Counties are being formed by the Organization Society for the purpose of handling live hogs, and others to conduct bacon factories. In at least some of these the members agree to market all their hogs through the society. In certain cases these societies have entered into arrangements with other societies which distribute food products, so that by means of two agencies, both cooperative, the pork finds its way from the producer to the consumer. An important reason for the organization of the live hog or bacon societies was the fact that buyers from London and other cities going into country districts made arrangements among them-

whereby prices paid to farmers were held down. It has shown conclusively that a cooperative society can break up a combination by providing its own selling agent and establish an outlet of its own for free communication with some factory near or distant.

### CREDIT SOCIETIES

These societies are organized under the Friendly Societies Act of 1866 and their work is governed in part by the Societies Borrowing Powers Act of 1898.

The former law provides for an office for the registration of friendly societies. This office distributes circulars giving instructions concerning forms of accounts, balance sheets and valuations. Societies which may be registered include a wide variety, and among them are cattle insurance societies, benevolent societies, workmen's clubs and societies especially authorized for any purpose which the treasury department may sanction as coming within the general provisions of the act. These provisions include certain requirements which are complied with by business seeking incorporation in England and a large number of details in connection with them.

Credit societies do not apportion funds or profits among their members, and they provide that all money loaned to members shall be applied in a manner approved by the society or its approving committee. The societies do not engage in commercial transactions. They receive deposits from members and advance loans to members. Members agree to unlimited liability. There are about fifty credit societies in England and Wales. Up to the present their loans have consisted largely of funds furnished by the people through a central cooperative agricultural bank, but part of the funds have come from accumulated reserves. These credit societies require good sureties for their loans, but do not require a mortgage such as is required by the usual stock bank. Their loans may run three, six, nine or twelve months. These credit societies point out that it is their special object to make small loans to small farmers, as large farmers have other satisfactory means of securing loans. Two hundred

and fifty dollars is the maximum loan which may be given to any one member. The loans are usually made on a promissory note of the borrower endorsed by two sureties, and sometimes additional securities when this is demanded. The societies are managed by unpaid committees. Losses are almost unknown, because only reliable men are elected to membership and no loans are allowed unless the committee considers that the objects for which they are wanted are likely to prove remunerative. Every member, being personally liable for losses, acts in the capacity of an inspector to see that no mistake is made. This abundant inspection has its influence on the borrower to do his utmost to accomplish the purpose for which the loan was secured. It is pointed out that private country banks are being absorbed by joint stock banks located in London, and the old conservative local banker, who was well informed concerning the affairs of the whole community, is gradually disappearing. This is an added argument for the credit banks.

On account of the increasing difficulty of doing business with the joint stock bank, a central cooperative agricultural bank has been organized and this bank is supported in part by guarantors who are members of the agricultural organization society. Effort is being made to raise a guarantee fund of \$500,000.

#### AGRICULTURAL CHAMBERS

An organization known as an Agricultural Chamber is located in each county. They are supposed to be non-political and to have the support of both political parties. Their objects are to assist in the promotion of the best interests of agriculture and especially to watch over all measures affecting agriculture in Parliament and to take such action in connection with these measures as may seem best. Agricultural questions not pending in Parliament are also considered. The chambers have formed an association known as the Central and Associated Chambers of Agriculture. It includes various kinds of agricultural organizations, both those interested in general and special subjects.

The bodies now associated number 111, representing a membership of about 35,000 persons. The Central Chamber numbers

380 members, a large number of whom are members of Parliament. Some of the county agricultural chambers are very active, while others are doing practically nothing. The Central Chamber, composed of delegates, accomplishes valuable results, chiefly through its legislative efforts. It maintains a permanent office in London. It has long been a custom for the chairman of this body to be a member of one of the houses of Parliament and it is customary for the vice-chairman to be a member of the other House. As a rule, the presidency alternates year by year between the two leading political parties.

The creation of the Board or Department of Agriculture as an important branch of the government service, in 1889, was said to be a direct result of the efforts of the Central Chamber of Agriculture. Recently the Central Chamber has been aggressively opposing legislation considered objectionable to farming interests. It avoids discussing tariff questions, because of the radically different views of influential members. Meetings of the council are held eight times each year and extra special meetings when necessary. Some delegates from local societies have their expenses paid, but about half of the delegates pay their own expenses. Usually the meetings are attended by more than 100 persons, or perhaps a third of the total membership. Most of the work is done by committees whose reports are received and debated and acted upon by the full body. Among the benefits claimed by this organization are the passage of laws preventing the importation of diseased animals, reduction of local rates of taxation, promotion of educational measures, regulation of railway and canal traffic, prevention of the sale of adulterated foods and drugs. Members of the Central Chamber must be proposed and duly elected. The membership fee is about \$5.00 per year. This entitles members to copies of the official reports, the privileges of the floor at the general meetings, the use of agricultural books, and the opportunity to secure information from the secretary.

## V FRANCE

Recent years have witnessed great improvements of crop yields and methods of cultivation in France. During the last fifteen years it is said that the average wheat yield has increased about fifty per cent. Much credit for this progress is given to agricultural organizations, of which there are more than 5,000 in the country that are interested in a wide range of subjects bearing upon agriculture. Very little assistance is given by the government to societies interested in general subjects, including buying and selling; but considerable help is given to credit and insurance societies.

As in some countries, agricultural societies in France may be divided into three groups:

First. Educational, not interested in commerce except in a very small way which is incidental to other work.

Second. Commercial, including societies that buy and sell products for their members, and a large number of credit and insurance societies (as a rule the organizations in this group deal only with their own members).

Third. Societies of agricultural laborers, interested chiefly in wages.

### SOCIETY OF FARMERS OF FRANCE

This society was organized about forty-two years ago and now occupies a splendid permanent building in Paris. In the same building there are also headquarters of several other agricultural organizations. The office work of this society is conducted by a secretary-general, an assistant secretary, a treasurer, and about twenty clerks. It has about 12,500 members, these being mostly large land owners; but others who are interested in agriculture are admitted, and the number includes from 700 to 800 affiliated societies. These last named societies are represented in the national societies by their presidents, who have the same voice as individual members. Each member, whether an individual or a society, pays about \$4 a year. Considerable capital is left to the

**FRANCE**



**FIG. 204. HEADQUARTERS BUILDING OF AGRICULTURAL SOCIETY OF FARMERS OF FRANCE**



**FIG. 205. LIBRARY OF AGRICULTURAL SOCIETY, PARIS**





society in bequests to be used in giving prizes and for other purposes. No funds are received from the government, and officers of the society are proud of the fact that they are independent of the governmental influence which would come with appropriations. Affiliated societies are scattered throughout the whole country. The number and kind in any district depends upon the character of the agriculture and the activity and enterprise of the people. They are "deliberative" and do not engage in commerce. They are independent of one another, though affiliated with the mother society. Some of these local societies are very active, while others are correspondingly inactive. It is said that they generally encourage the agricultural experts who are maintained in their respective sections by the government, and thus work of these experts is made much more effective. It is said also that the local societies receive a small amount of government aid if the expert so recommends. This aid may be withheld if the government deems the district to be "reactionary." The government funds are used largely in the conduct of shows for cattle. The local societies give special attention to the improvement of cows. They do not conduct the usual cow test or control associations; prizes are awarded for meritorious animals selected in other ways.

The Society of Farmers of France was created to study all questions of interest to agriculture. It does not engage in commercial business. It has fourteen sections, devoted to as many subjects, and each one is governed by a special committee. Its chief activities are the following:

**Instruction.** From twenty-five to thirty experts are employed occasionally. Prominent and successful farmers are selected for lecture assignments. They are paid for such work an honorarium of about \$4 a day, and frequently they speak before local societies, their expenses being paid by the societies addressed. Considerable value is attached to the discussions that are aroused in connection with these addresses.

**Prizes.** These are awarded to persons who are considered to render the best service for the advancement of agriculture. Funds received through bequests are commonly used for these prizes.

**Bulletins.** These cover timely subjects, such as plant diseases, and are distributed to the members. (The government also sends out agricultural literature in bulletin form.)

**Legislation.** This section of the society keeps close watch of agricultural tariffs and presents the views of the society to the government as the interests of the farming classes seem to require.

**Laboratory.** This is maintained by the society for the convenience of members, and on account of fees charged is about self supporting, requiring a small appropriation only from the society.

**Library.** A large agricultural library is maintained in the headquarters building.

**Grants of funds.** Money is donated to agricultural schools and experiment stations to secure their assistance in the investigation or development of special subjects. The grants are most liberal in the interest of two schools that are not maintained by the government.

**Cattle diseases.** Outbreaks of diseases are investigated and remedial measures are recommended to the national department of agriculture.

**Experts.** These men are trained in the use of agricultural machinery, knowledge concerning which is greatly needed because of the increasing use of machinery.

**Cattle shows.** The government conducts shows, and the society holds smaller shows in districts, during the interval between those of the government, so as to help maintain among the farmers a keen interest in improving livestock and agricultural methods.

**Purchase of supplies.** While the society does not engage in commercial business, it sometimes assists members in purchasing fertilizers, cattle or other supplies, but this is done only as an accommodation. Whatever the society handles in this way is done without profit. As a rule the members are referred to the buying societies. But this society is said to have carried on a propaganda which has prevented certain dealers from getting a monopoly in the fertilizer business.

### THE NATIONAL AGRICULTURAL SOCIETY OF FRANCE

This society is about 150 years old. It has only fifty-two regular and forty associate members. Membership is extended to a limited few who have made a reputation in agriculture. The organization is comparable with an academy of agriculture and is strongly scientific. It has some property, receives legacies, and gets \$4,000 annually from the government. The members meet once a week, and a technical agricultural publication is issued monthly.

### SOCIETY FOR THE ENCOURAGEMENT OF AGRICULTURE

This society exerts some influence for agriculture. Its field seems to overlap that occupied by the Society of Farmers of France. It does not buy or sell goods or publish statistics. Its educational efforts are largely through the support of the government experts in the various districts. It has some political influence.

### CENTRAL UNION OF SYNDICATES OF FRENCH FARMERS

No government help is extended to this organization. It conducts its work largely through about 2,200 local societies which are known as syndicates and has about 600 active members. This central organization buys enormous quantities of supplies for its members. Goods are handled quickly when needed but warehouses are not maintained. Purchases are made direct by groups of local syndicates, or through the national office. In 1911 there was supplied to members about 40,000 tons of fertilizer, a large quantity of cattle feeds, coal and machines. Some of the societies claim to buy anything a member wants, but they do not carry a large assortment of goods.

An important function of the central union is the exchange of commodities between syndicates. Except in a few instances, these commercial societies are not well equipped for selling farm products; but in southern France there are organizations which are selling and exporting fruits in a most creditable manner. One of these, with headquarters at Marseilles, refuses to accept fruit of low quality and the name of this society has become a guarantee of high quality in markets where its products go.

## CREDIT SOCIETIES

Special facilities for various forms of rural credit in France are of recent date. Independent societies and others receiving government funds are in operation. The independent societies are similar to German organizations, some of them are said to be modeled after the Raiffeisen banks. Deposits of members and funds borrowed constitute the working capital. The members do not hold shares, and receive no dividends. The reserve is made up of accumulated profits and when this amounts to as much as one-fourth of the necessary capital for conducting the work of the society the interest rate on loans is lowered to a point at which the income will just about meet the general expenses. The loans are very small in amount, they are limited to the members and are allowed only for a definite purpose. The societies pay interest on deposits of about three per cent.; loans are made at about four per cent. The loans are given on personal security or on mortgage, and when for long periods, arrangement is made for repayment of a part of the principal annually. The members of these societies assume unlimited liability.

These local banks are affiliated with larger banks which operate in larger territories and which assist in exchanging funds between the smaller ones. That this class of institutions is thriving may be judged from the fact that in 1893 there were seventeen banks of this kind, and in 1910 there were over 672, with more than 28,000 members and doing an annual business of about \$4,000,000.

Societies or bureaus for credit are formed by members of co-operative buying and selling societies. Each member takes a share of stock, costing from \$4 to \$5. After the organization is effected new members are added by election, and effort is made to avoid persons who are unreliable or too neglectful of their work.

There are small numbers of other mutual credit societies or banks operating on somewhat different plans, but the chief activities along this line are in connection with societies receiving financial aid from the government and these operate chiefly under laws passed since 1893.

Throughout the country there are ninety-six regional banks. Each one of these is affiliated with a number of local banks serving

small districts. Funds used by these banks come largely from the Bank of France. As a condition imposed for the renewal of certain privileges, this bank was required by the government to advance \$8,000,000 without interest and to turn over a sum not less than \$400,000 a year, which latter amount is not to be returned. The annual payments depend upon the amount of business done, and they have been twice as much as the minimum required. Thus the government has created a fund for the benefit of its system of agricultural credit. It is said that no other government has done as much.

The regional banks are entitled to receive from the government an amount equal to four times their paid-up capital, and this without interest. The funds are distributed through the ministry of agriculture and the operations of the banks are under the inspection of government agents.

The regional banks are organized by individuals and local banks, the latter having representatives on the board of management. The amount of deposits which may be accepted and the amount of dividends on shares are limited by law. The profits constitute a reserve fund from which government loans are to be paid. The working capital of the regional banks in 1910 amounted to about \$14,000,000, including about \$8,000,000 received from the government and less than \$4,000,000 representing paid up capital.

There are about 4,000 local banks affiliated with these regional banks. The members subscribe for shares, paying in, ordinarily, about one-fourth of the amount. These shares may not yield more than a four per cent. premium.

In some societies the liability of the member is limited to his shares. In other societies the members assume larger liability, even to the extreme of making it unlimited. In some instances the committee managing the society is made responsible for losses. A part of the funds of these societies are invested in stock of the regional bank.

It is an easy matter for a member of the society to secure a small loan. This is given to him on his note and his honor, but sometimes sureties are required.

Interest on loans is usually about four per cent. The size of loans is limited frequently to as low as \$200. The loans are made for specific agricultural purposes, their value in 1910 being about \$14,000,000. Ordinarily the loans are made for three months and may be renewed for periods of the same length, but partial payments are required with renewals. The local bank pays three per cent. for its funds and commonly loans to farmers at three and one-half per cent. When application is made for a loan this may be passed on to the regional bank and thence to the head office, which accepts the regional bank and the local bank as ample security.

The kind of loans made by these societies are classified as:

1. Short time loans to individuals, which are the most important.
2. Short time loans to cooperative societies.
3. Long time loans to individuals. The maximum period of these loans is fifteen years, the maximum loan being about \$1,600. These loans are made to enable farmers to enlarge or permanently improve their property. Rate of interest is only two per cent. and arrangement may be made to pay off the principal by annual payments.
4. Long time loans to cooperative societies. The rate of interest here is also two per cent., and loans may be made for as long as twenty-five years.

Mortgage loans for long terms are made by the Credit Foncier, which has close official connections with, and is supervised by, the government. This is not a cooperative society, but mentioned here because of its important bearing to the subject of loans. From this great financial institution borrowers may secure funds for long periods, a maximum of seventy-five years, and pay for the principal by adding a small amount each year to the interest payments. Loans on farm lands may amount to about one-half the value of the land and buildings. The latter are valued low. A seventy-five-year loan with amortization provision costs about four and one-quarter per cent. Provision is made to enable the bank to dispose of property if its value falls so as to threaten the security for the loan. Funds used by this bank are borrowed from the public on bonds which pay three per cent.

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The American agricultural visitor in Germany finds an amazing number and variety of agricultural organizations. Most is heard about the credit societies which abound everywhere, but operations running into enormous totals are conducted by farmers' buying societies. There are also organizations for promoting different phases of agriculture through education and even through political means. The German methods are not new, but they seem of late to have attracted the attention of the civilized world. A trained expert from England recently spent about two years officially in Germany studying its agricultural organizations. Many other individuals and delegations have spent months in that country to learn of customs that would be valuable but are unknown in their native lands. Some students have come from Japan. At Darmstadt there is a school maintained especially for employees of cooperative societies. The term lasts six months, and besides a class of from thirty to forty Germans there are usually half a dozen foreigners included in the limited attendance.

As an illustration of the number of organizations in operation, the following were found in the city of Posen: an agricultural chamber with affiliated societies devoted to different phases of agriculture, a farm labor society organized to assist in finding laborers, a branch of the Royal Agricultural Society, two banks serving agricultural interests, a cooperative farmers' insurance company; and in the vicinity of Posen there are societies interested in poultry, bees, hops, seeds, wines, fruits, garden products, the welfare of farm laborers, spirit production, dairying, threshing, buying and selling supplies, and potato drying.

### OFFICIAL AND SEMI-OFFICIAL BODIES

Besides the ministry of agriculture, there are many official and semi-official bodies responsible for various phases of agricultural development or supervision.

The Royal Agricultural Board consists of twenty-five members who secure their position by election from agricultural chambers

or leading agricultural societies or by appointment of the Minister of Agriculture. These latter members are not permitted to exceed in number one-third of the elective members. No salaries are paid. This board acts as an advisory board to the Ministry of Agriculture and considers matters of general interest to the agricultural chambers.

A Veterinary Council gives expert opinion on veterinary affairs to the Ministry of Agriculture and to courts of law; it receives reports from official veterinarians and compiles statistics of cattle diseases, and assists in conducting examinations for veterinary positions.

A Marsh Commission serves as an advisory board on the subject indicated by its name. In recent years it has also given attention to the cultivation of light sand soils.

There are seven provincial annuity banks in different cities. These are under the ministers of agriculture and finance and are intended to assist in the relief of poverty.

There is a supreme agricultural court, located in Berlin, which is a court of appeal from decisions of various commissions.

Nine general commissions have supervisory relations to affairs between landlord and tenant, certain taxation questions, estate consolidation and separation, agricultural annuities banks, water control, forestation of vacant land, settlements on government marsh lands, the founding of loan and savings banks and credit and mortgage societies, and certain judicial functions.

The Colonization Commission, with headquarters in Posen, has special charge of bringing about the German settlement of large areas of the empire not now occupied by German people.

There are various financial institutions with different degrees of responsibility to the government.

There are five headquarters for horse breeding, with eighteen branches.

The official financial budgets carry considerable sums for the development of different phases of agriculture; for example, a fund for the maintenance of dykes, dams and drainage and a marsh experiment station; over \$50,000 to be used in connection with the development of meadows; about \$200,000 for the assist-

ance of agricultural societies and the general promotion of agriculture; about \$75,000 to be used in the interest of orchard, vineyard and garden products; and items for other such purposes.

### *Classification of German Agricultural Societies*

The agricultural societies of Germany may be classified in three groups:

1. Official societies, which include the chambers of agriculture. These are organized under laws of the different states; for example, there are twelve in operation under the Prussian law.

2. Private organizations having a voluntary membership, including the German Agricultural Society with 18,000 members along technical or educational lines, the League of Farmers having about 300,000 members, and farmers' societies or unions of which there is a very large number, their purpose being chiefly technical.

3. Cooperative societies. Their most important activity is in personal credit. One authority goes so far as to say that these societies "have saved the German farmers from extinction." Private bankers and capitalists, cattle dealers and tradesmen, were charging from eight to ten per cent. on loans and taking as security some essential part of the farm equipment such as a horse or a cow in years past. In thousands of cases the farmer was unable to make payment and suffered heavy and cruel loss, because he had the misfortune of a poor crop and needed to borrow a small amount of money for temporary relief.

There are also unions of farm employees and these societies have their chief union, the total membership numbering about 18,000. Special societies are devoted to the development of the sugar industry, the manufacture of alcohol, breeding, poultry, bees, and other subjects.

## CHAMBERS OF AGRICULTURE

In the belief that the voluntary agricultural organizations, of which there were many, were not capable of properly representing agriculture and promoting its interests, a form of organization has been provided by the government to assist in meeting the growing requirements, which includes advice to government officials and assistance in carrying forward new policies toward agriculture. The organization of chambers of agriculture was authorized by a law in 1894. This law provides that they shall give attention to all matters relating to agriculture and forestry, with special attention to the organization of farmers into co-operative societies. A person is eligible to membership of a chamber only if he is earning his living by farming and independently of other sources of income. Exceptions are made for persons who still live in a district where they were formerly actively occupied in farming and for persons who have served a long period on the managing committee of a chamber or as an official of agricultural or cooperative societies. Other persons who have given signal service to agriculture may become members. Chambers are empowered to levy taxes, and this money is collected with other taxes by government officers. The tax may be as high as one-half of one per cent. of the land tax assessment. A slight increase may be allowed by special action of the Minister of Agriculture. This tax provides for from \$50,000 to \$75,000 for a chamber in an important district. The government makes appropriations also to the chambers for certain phases of their work.

The chamber at Halle was visited. It was founded in 1896 by the union of an agricultural society and a society for bettering farm laborers' conditions. This is one of the oldest and largest chambers in Germany. It occupies an immense building, containing a beautiful hall with seats for about 500 persons, and another hall for smaller meetings, and a well equipped kitchen for use in serving dinners. The building contains also living rooms for the president and the director. The many offices are occupied by about 300 employees of the chamber and a central cooperative society and one or two other agricultural organiza-

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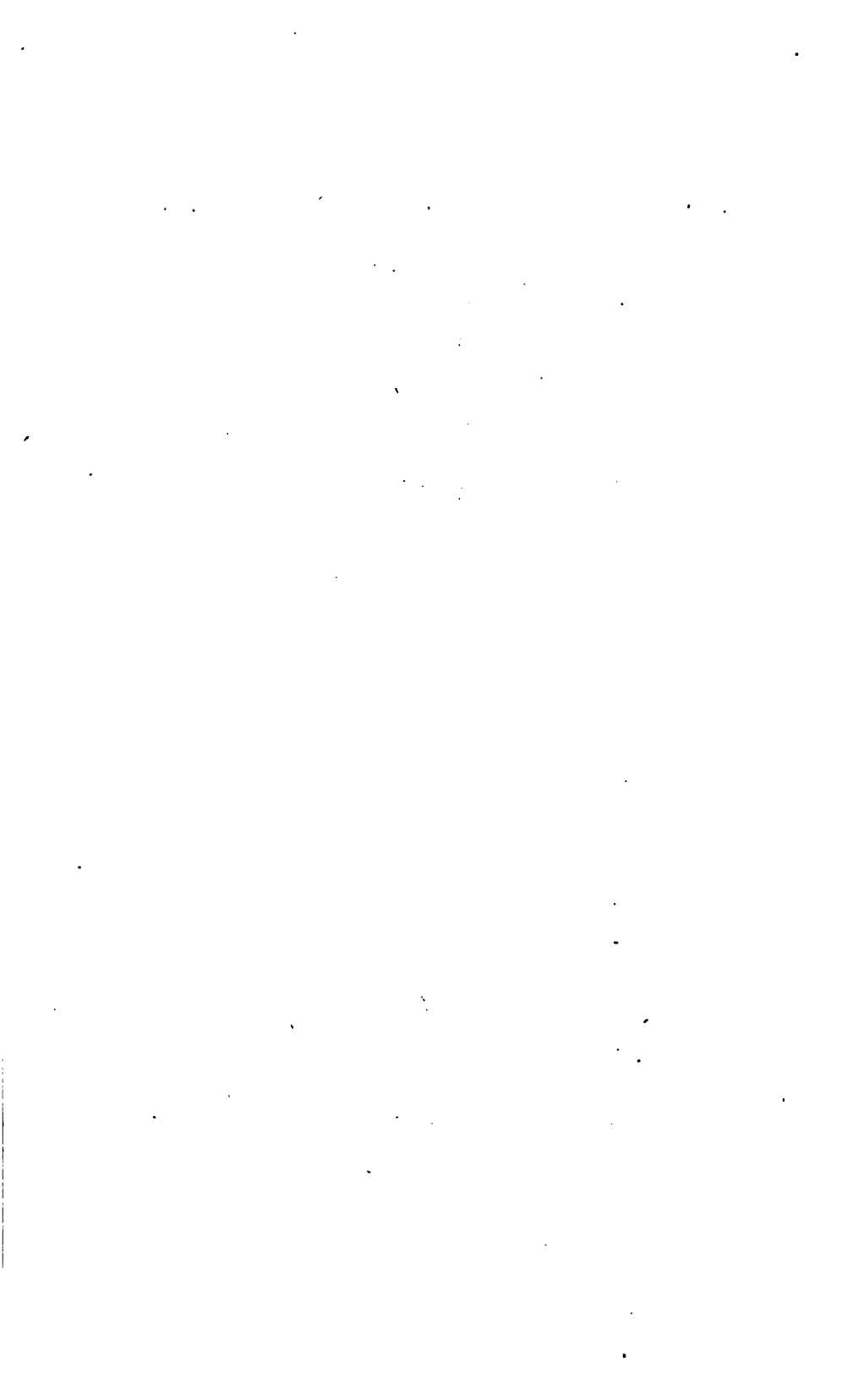


FIG. 206. AGRICULTURAL CHAMBER, HEADQUARTERS BUILDING, HALLE



FIG. 207. COOPERATIVE SEED PRODUCTION NEAR POSEN





tions. The ordinary members of this chamber are located in thirty-nine different constituencies, including twenty-eight rural political districts which are independent, and eleven which are combined with town districts. A constituency elects two or more members, depending upon the amount of ground tax the district pays. The general membership elects a general assembly consisting of one hundred and twelve members, each one serving six years, and ten advisory members elected for three years each. The board of directors has thirteen members, the president, two vice-presidents, and ten ordinary members. There are twenty-five so-called boards of trustees of from three to eight members each, each one being in charge of the operation of some agricultural institution, such as a chemical experiment station, a plant station, a poultry breeding station, a cattle insurance branch, a school on pastures, one of the eleven winter agricultural schools and a small number each of domestic economy schools and horse-shoeing schools. The finances show a surplus of about \$750,000, which is chiefly invested in real estate in Halle. The home building of the chamber is valued at about \$250,000 and carries a debt of about \$85,000.

The income of the chamber in Halle in 1897 amounted to nearly \$75,000; in 1904 about \$220,000, and in 1912 nearly \$400,000. Of the income in 1912 the national government appropriated seventeen and five-tenths per cent., the provincial and smaller governmental districts appropriated seven and seven-tenths. Eighteen and three-tenths was received from compulsory contributions through the ground tax, and fifty-six and five-tenths per cent. represents fees for analyses, and such other services as the chamber performs. The compulsory contributions in 1896 were one-quarter of one per cent.; from 1897 to 1903, one-third of one per cent.; from 1904 to 1907, two-fifths of one per cent., and from 1908 to 1912 one-half of one per cent. The percentage applies to the total collections of land tax.

There are employed by the chamber about 500 clerks and other permanent employees, including 125 teachers who give part of their time to the schools referred to elsewhere. Ninety of the employees have had university training. Salaries in 1912 amounted to nearly \$185,000, about \$75,000 of which was paid to

employees at the head office, and \$32,000 to employees of agricultural schools and \$11,000 to the support of the agricultural chemical experiment station, the plant station and two experimental farms. About \$2,000 is allowed for a poultry breeding station.

The work of the chamber is promoted almost entirely by committees, each committee having five members selected by the general assembly and empowered to add to their membership as many as eight persons not connected with the chamber. The work is divided under fourteen headings, as follows:

1. Agricultural societies and schools. The Chamber took over from one of the societies which it absorbed, 120 affiliated agricultural societies with nearly 14,000 members. The number of societies and number of members since has greatly increased. These societies receive through the Chamber appropriations of government money as subsidies for their work under conditions imposed through the Chamber. The eleven wandering schools show an attendance of 645 pupils; schools on meadows, 166; schools on domestic economy, 248; horseshoeing schools, 91, and general agricultural schools, 32.

2. Crops and experiments. This section approved in one recent year the crops of seeds raised on fifty-six farms, and in four years has awarded about \$1,400 as prizes to twenty-three peasant farmers for superior methods. It has assisted its members in carrying out nearly 5,000 fertilizer experiments, 2,100 tests of varieties of plants, and in the erection of 175 manure sheds.

3. Animal breeding. Seven breeding associations, representing different kinds of live stock, are being assisted. Aid is given to twenty-four cow test associations having 346 members and over 8,000 cows. Advice is given upon planting of permanent pastures, the selection of purebred stock, the organization of local shows, and the purchase of breeding stock. One hundred and nineteen stallions belonging to private societies have been approved. These include eighty-five Belgians, seven Shires, three of the Danish breed, and twenty-four high grades. The budget of this section for

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FIG. 208. DIRECTORS' ROOM, AGRICULTURAL CHAMBER, HALLE



FIG. 209. ASSEMBLY ROOM, AGRICULTURAL CHAMBER, HALLE





1912 is interesting because it shows the large amount of money handled and the purposes for which it was expended, being approximately as follows:

For horsebreeding .....	\$11,500
Cattle breeding and cow test and dairy work .....	20,000
Swine breeding : .....	3,500
Sheep breeding .....	125
Goat breeding .....	900

4. Agricultural machinery. Tests have included four centrifugal separators, four soil working machines, two fertilizer distributors, three mowing machines, two threshing machines, one straw press, one beet puller, one potato planter, one horse rake, and other small implements.

5. Fruit growing and garden industry. The affairs of fruit growing and garden associations are supervised. There are over 200 of these organizations, with about 14,000 members. A paper published under this section has a circulation of over 7,000. Twenty-one contracts with nurserymen have been made by this section to assure members getting good stock. Prizes and medals are given for good orchards and gardens. An autumn sale of fruit is conducted in Halle as well as a short course of instruction on fruits and vegetables which has an attendance of about 200 persons. The annual budget provides funds for supporting the monthly periodical, which, however, is covered by subscriptions and advertisements; the budget includes nearly \$5,000 to be used in other ways for promoting this work, more than half of this fund coming from state appropriations.

6. Forestry. Efforts are made to assist in further carrying out the purposes of the laws regarding forests.

7. Bookkeeping. One hundred and fifty farms have committed their business records to the care of this section. The expenditures on this work in one year amount to over \$8,000.

8. Farm labor. The employment agency furnished in 1911 over 6,000 native laborers and about 19,000 foreign laborers. In this work fifteen branch agencies are distributed through the province. Foreign laborers are secured through a central office in Holland.

In one year legal advice on farm labor questions was given in written form in about 400 cases, besides many oral opinions. About 600 breaches of contract with laborers were investigated. Illegal professional labor agents have been exposed. An interesting function of this society is the recognition of servants and workmen for faithful service, through the award of medals. The expenses of this section are covered by the income from fees of the employment agency.

9. National economics. This section takes up the larger economic questions in so far as they are not being cared for by other sections.

10. Buildings. Advice is given on many technical questions. Building designs are examined and criticised and the erection of buildings sometimes supervised. In 1910 the buildings erected for members cost nearly \$300,000.

11. Insurance. Insurance is carried on breeding bulls and boars, to the value of about \$120,000 and \$60,000 respectively. By special arrangement with private companies, the Chamber, through this section, carries insurance on animals in transport and on pregnant mares, the values thus being carried are about \$115,000 and \$220,000 respectively. Hail insurance, life insurance and employees' liability insurance are included.

12. Legal bureau. Advice is given on legal questions arising in the chamber itself and brought up by private members, especially on such subjects as the loss of trade, right of way, real property, and hunting. There is an average of about 450 written legal opinions rendered annually.

13. Editorial section. The weekly journal of the Chamber has a circulation of about 30,000 copies. Numerous other publications are issued. There is a library of 13,000 volumes.

14. Technical culture. Two hundred and one ground-water observing stations are established. Irrigation and drainage problems are being studied. In some cases ponds are constructed. Assistance is given also in laying out farms.

The Chamber at Posen was visited. It has the power of placing a tax levy on all farm and forest property up to one-half of one per cent. of the land tax and can raise this to one per cent. with the approval of the ministry of agriculture. On a three-quarter of one per cent. basis the Chamber raises about \$35,000. This tax does not bear heavily on small farms; in fact, many of these are exempted because it would add too greatly to their burden and it would cost too much for collection of such small amounts. The reason that the tax is made a required charge against all of the larger farms is that all such farms are supposed to derive benefits from the use of the funds. A farmer having from fifty to seventy-five acres pays from twenty-five to fifty cents a year toward this tax.

This Chamber of Agriculture has replaced various provincial societies and taken over their privileges and property. There are seventy elected members of the chamber. There are forty affiliated district organizations, the membership of which is made up of owners of large farms, representatives of towns, and representatives of rural communities, the first being in the majority. One of these district organizations may elect two members to the chamber. The seventy members have a general meeting once each year, at which time they are allowed railroad fare and about \$2.25 a day for expenses. They have the right to add to their membership up to a ten per cent. increase by the election of men of special merit in agriculture for advisory purposes only. The annual meeting usually lasts one or two days. The principal business consists of election of officers, appointment of committees and appointment of delegates to the meeting of representatives of chambers for the entire county. All members of the chamber must be or must have been practical farmers.

There are committees on legislation, transportation, organization, livestock, breeding, veterinary service, forestry, agricultural

instruction, finance, and other subjects. These committees meet from one to five times a year, at which time their expenses only are paid.

An important item of the annual meeting of the chamber is the decision as to the ground tax. In addition to this tax the chamber receives appropriation from the state of Prussia and the government of Posen, also considerable income from fees and subscriptions to its periodical publication, bringing the total income up to about \$250,000 a year. The advice of the chamber carries much weight with the government officials. This chamber also has important relations with the experiment station, seed station and farm labor bureau, winter schools, station for the selection of stallions and bulls, and other subjects.

This chamber assisted materially in securing tariff legislation which would protect agricultural products. The present tariff protection is claimed to have changed farming from a profitless to a profitable industry and thus to have led to a great increase of prosperity in Germany.

#### THE GERMAN AGRICULTURAL COUNCIL

This organization represents the entire empire. It is composed of delegates from all the chambers of agriculture and it represents all their interests, although it is not officially recognized. It gives some attention to political matters. A weekly paper is published giving prices and statistics for agricultural products, also a monthly paper. In 1911 this organization had a total income of about \$15,000 of which about \$5,000 was paid for salaries.

#### GERMAN AGRICULTURAL SOCIETY

This organization has headquarters in a first class building erected in Berlin in 1902, and here a large number of employees are constantly engaged. In 1911, 18,484 members; in 1900, 13,035; in 1890, 5,626; and in 1884, only 250. The society has accumulated a fund of nearly one million dollars, a large part of which is invested in the office building. No government grants are received by this society and the officers seemed to feel special pride in making this statement as they wish to be free from

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**FIG. 210. HEADQUARTERS BUILDING, GERMAN  
AGRICULTURAL SOCIETY, BERLIN**



**FIG. 211. LAND MORTGAGE BANK, DARMSTADT**



governmental influence or interference. From the beginning the idea has been upheld that the organization should support itself and not depend upon state aid. The society is on friendly terms with other societies. It is strictly non-political.

The chief purpose of the organization is the promotion of agriculture by improvement of agricultural methods. The leading idea of the founder, Max Eyth, was to unite the principal men of all Germany in the study of new questions regarding practical agriculture which the existing societies had been unable to master. This leader and his associates desired especially to introduce science into agricultural practice.

Financial assistance is secured through memberships of many prominent and well-to-do farmers and land owners. The annual membership fee is about \$4, and life membership about \$40. The members of this society are chiefly large land owners, but there are also some small farmers; the fee of \$4 is too much for most of the latter class. The budget for the year 1910 shows about two-thirds of this being from fees for services of various kinds. The expenditures amount to about \$50,000 annually less than the receipts. The largest item of expense is about \$126,000 for salaries.

There are three general meetings of the society each year, two in Berlin in October and February, the latter being the principal meeting; and the third at the point where the society's show is held.

The affairs of the society are controlled by a committee composed of the president and other officers of administration and additional elected chairmen of leading committees and sections. There is a large staff of employees, including a chief of the offices, nine general assistants, nine scientific assistants, nine bureau chiefs and 227 clerks and helpers.

There are eight sections and forty-nine committees giving attention to special phases of the society's work. These meet several times yearly.

A weekly journal is distributed to the members. It gives notices regarding society affairs and contains technical information. Over 200 bulletins and many circulars have been issued. In one year there was sent out over 500,000 pieces of printed

matter. The publications are considered of high value and members have sometimes been offered as much as \$10 for their set of printed matter covering only one year.

Many technical questions are received from members and answered by means of over 250,000 written communications in a year. The section on farm buildings gives much assistance to members proposing to put up new structures, and the personal assistance of experts is furnished in the preparation of designs and awarding of contracts. In some instances the society will take full charge of the building operations. A bookkeeping section assists farmers in organizing and keeping business records and shows them how to make necessary reports concerning taxes. A section on seeds conducts experiments on seed production and by making inspection of crops and recommending those most highly approved encourages the raising of good seed.

The total of business done in 1911 shows over \$4,000,000 in bank business and nearly one million handled through the office.

Large quantities of fertilizers, feeding stuffs and seeds are purchased for members at most favorable terms possible.

Agricultural shows are held by this organization, a custom of many years. These shows are held in different places from year to year and they are said to have a strong influence for betterment in the sections where they are held. The country is divided into twelve districts and the show is held in these alternately; twenty-five of them have already been held. The plan of changing the location from year to year seems to be well liked. It is not aimed to make money from the show and it is often a losing proposition financially. In one year the society lost about \$38,000, but in other years there have been reasonable profits. The average show is conducted at a loss of about \$9,000 per year. In recent years the average paid admissions number as high as 300,000. The most important part of the show is in the animal exhibits, where there is keen competition for prizes. Special classes provide for agricultural products and methods. Implements and machines receive considerable attention. At the Hamburg show in 1910 there were 660 horses, 1,268 cattle, 828 sheep, 782 hogs, 219 goats, 585 poultry, 281 rabbits, 245 fish exhibits, 3,870 miscellaneous items and 7,938 implements. Nearly \$40,000 was paid out as prizes.

Members are given the opportunity to have their soil and other products examined by experts. In cooperation with scientific organizations extensive studies have been made of fertilizers. Pastures and meadows are now receiving scientific attention. The problem of the use of town waste for the benefit of agriculture is being diligently studied. Records of the result of the use of fertilizers are kept and suggestions are made for further experimentation. Much emphasis is given to the care of fertilizers and especially the care and better use of stable manure, also in regard to green manure and the growth of leguminous crops. Last year this society brought about the purchase of millions of pounds of Kali salts, Thomas slag and other fertilizers and indirectly handled over 20,000,000 pounds of feeding stuffs. A corps of travelling instructors go about the country doing such work as assisting farmers to introduce new methods, and to make fertilizer experiments. It is said that at times as many as 300 of these instructors have been on the pay roll; in their work the society co-operates with chambers and schools of agriculture. The machinery section gives special attention to problems of working the soil and to the application of electricity to farm operations.

Through the seed section, machines for harvesting and using seeds are critically examined and great attention is given to seed improvement. It is being constantly pointed out that the least expensive method for greatly increasing crop yields is through the use of better seed. Tests are made throughout Germany to ascertain the adaptability of seeds to local conditions, and the seeds tested include winter and summer wheat, rye, oats, beets, peas, lupines, clover, and grasses. A promising crop being grown by a member is examined by the society and an agreement entered into as to a price for it. The society then assists in making sales. A "high breeding register" is maintained for new varieties of plants and their superior points are recorded. Persons recognized in this register may use the society emblem in their advertisements. In one year over 6,000,000 pounds of seeds were purchased with the assistance of the society, including almost 1,000,000 pounds of clover and grass seed. An active fight is constantly maintained against the introduction or spread of plant diseases, pests and weeds.

Much attention is given to the uses of agricultural products and at times a propaganda is carried on in the interest of different crops. The best uses and markets for meat and dairy products are illustrated and designated. In this and other connections, experts are sent by the society to foreign countries to study methods of receiving, shipping and marketing farm products. The drying of potatoes is a recent development of this effort.

Better breeding of live stock receives its chief impetus through the yearly show, a system being in operation through which co-operative breeding societies are closely affiliated with the national show and receive certain benefits from it. Local societies are not permitted to exhibit unless they have observed the rules of the agricultural society. Better prices for better live stock, the appreciation of the value of such stock, and the emphatic need of animal manure to maintain fertility, have provided a great stimulus to animal husbandry. The society assists in the importation of superior draft horses and encourages their breeding. Cattle are being improved to a limited extent in the same manner. Much superior live stock has been brought in from England. Bulletins have been distributed on the feeding and care of animals.

Much attention is given by the society to farm bookkeeping, with the view to better determination of costs. Inspections are made and advice given on farm management.

In short, the scope of the German Agricultural Society is as broad as agriculture and as wide as the whole country. This society aims to be able to give assistance in each important phase of agriculture wherever it is needed.

#### LEAGUE OF FARMERS

The purpose of this league is to improve the standing of agriculture in public life, in legislative bodies and with the press. There are about 330,000 members. Its headquarters are in Berlin, in a large, well furnished and handsome four-story building of permanent construction which was finished but recently at a cost of about \$425,000. One hundred and eighty-seven people are employed in the main offices. Thirteen branch offices are operated throughout the Empire. This league was organized when

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**FIG. 212. MAIN ENTRANCE OF THE HEADQUARTERS BUILDING OF THE LEAGUE OF FARMERS, BERLIN**



**FIG. 213. DIRECTORS' ROOM IN THE HEADQUARTERS BUILDING OF THE LEAGUE OF FARMERS**





the government was considering free trade for agricultural products and it has conducted a vigorous campaign of education in favor of tariffs on such articles. As one item in connection with this work, there were distributed 2,000,000 sets of ten postal cards illustrating the importance of agriculture as compared with other industries, the advances of prices of articles outside of agriculture as compared with prices in agriculture, and emphasizing the fact that the most and the best soldiers come from the country districts. Apparently the campaign was successful.

Membership dues are graded according to land ownership and amount to nearly two cents an acre. The minimum payment is about seventy-five cents. One member pays as much as \$125. Many pamphlets are issued and a weekly paper is sent free to all members. A technical journal is also issued twice a week to about 15,000 subscribers, at a subscription price of about \$4 a year. There is another weekly paper with a subscription rate of about \$1.25 a year. Close relations are maintained with the stronger newspapers and the society issues to them frequent news letters of interest and even prepares editorial material for the general press.

Nearly one hundred speakers are occupied in the winter season promoting the purposes of the league. Some of these are permanently employed and others for only half of the year. The speakers are brought together in October to attend a speakers' school, where they are given facts and carefully taught how to withstand opposition in or out of meetings. In this school speakers present their addresses and the instructors interrupt and oppose them as an unfriendly hearer might do. Last year they held over 8,000 meetings, which were largely of a political character. Their constant effort is to increase the home production of food products, and they have no hesitation in objecting to the importation of these articles, because of the consequent depression of prices.

Although the commercial activities of the League of Farmers are not rated as of first importance, the amount of its receipts and expenditures in one year exceeds \$50,000,000. The value of fertilizers and feeding stuffs distributed to members is about \$3,000,000. Business is conducted through affiliated cooperative societies, of which there are 377. Most of the clerks in the head

offices are employed in connection with the commercial operations. A large business is done also with affiliated cooperative credit societies.

A person desiring to borrow from the League must be a member of one of these affiliated societies, and in making application he must agree to allow the government official in charge of income tax records to tell the cooperative society how much he is worth. The cost of membership in the local society is low and the member becomes responsible for ten times this payment. In some societies there is unlimited responsibility. In the former case, the loan may not exceed the amount of the member's liability. An affiliated credit society must keep on file with the league statements showing the financial standing of members. If these aggregate as much as \$25,000, then that society may borrow as much as \$15,000. Funds are loaned by the league at about three and three-fourths per cent. interest and the cooperative society loans to the individual member at four to four and five-tenths per cent. The cooperative societies are inspected by agents of the league, the law requiring strict inspection at least every two years, but it occurs more often.

As the league has connections with credit societies over a large area, it uses large sums on deposit from some societies for loans to others where there is a shortage. When outside funds are needed it secures a loan from the Prussian Central Cooperative Bank, which is state aided. The amount which the central bank will loan to the league is determined by the league's credit, which is fixed twice each year and depends largely on the number of affiliated cooperative societies and their standing. In order to strengthen its standing, the league requires that its affiliated societies shall do business with it only.

This league is opposed by a small league of peasants which is said to be promoted by persons having contrary political ideas.

#### BUYING AND SELLING SOCIETIES

The principal articles purchased through cooperative societies in Germany are fertilizers and cattle feeding stuffs, but considerable purchases are made also of other materials and articles.

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**FIG. 214. COMMITTEE ROOM IN HEADQUARTERS BUILDING OF THE LEAGUE OF FARMERS**



**FIG. 215. CONFERENCE ROOM IN HEADQUARTERS BUILDING OF THE LEAGUE OF FARMERS**





It is estimated that about one-quarter of the amount spent annually by German farmers in the purchase of supplies is through cooperative societies. Large quantities of supplies are furnished through the German Agricultural Society, the Farmers League, and by thousands of societies having other interests, especially the banking business; but there are about 2,500 local cooperative societies interested exclusively in purchases. These societies cover with their operations small territories, usually including one or a few parishes. The local organizations are combined into organizations covering large territories, and through this means orders are accumulated which makes it possible to secure lowest prices.

The sale of farm products also is conducted through cooperative societies and in connection with some products these organizations have become very active, efficient and prominent. There are over 3,000 officially registered societies interested in dairying, and nearly 1,000 unregistered similar societies. The value of products sold by all these dairy societies is said to amount to about \$100,000,000 a year. The societies are popular, because, through them, farmers are securing better prices, greater security against dishonest tradesmen, and certain educational advantages. Members of these societies must agree to deliver all their milk which is not required for home use. They are not permitted even to manufacture butter for sale. From small farmers the milk is collected by route wagons. It is usually paid for on the basis of the fat test. Cattle breeding and egg selling cooperative societies are in operation, also societies for assisting in the sale of grains.

Recently there has been great development of cooperative societies interested in promoting the use of electric light and power on the farms. There are now over 500 of these societies. The introduction of electricity is greatly encouraging the use of small machines, such as cream separators, and small grinding mills.

Cooperative societies for purchasing machines and loaning them to members are becoming more popular. There are more than 500 of these organizations with about 12,000 members. The machines most commonly handled are threshing machines and steam plows. These machines are also owned by some of the cooperative banks. The latter classes of societies have their large central organizations. Several of these were visited.

It was learned that merchants have opposed the work of this organization and objected to the establishment of new local societies. Concerning this situation, the question was asked if these organizations would have been established if the merchants had been honest and had sold their products on a fair margin of profit. The answer indicated that the societies are believed to be of greatest value when farmers have to secure articles whose quality they may not easily determine, thus leaving no opportunity for fraud from dealers that might not be honest. The supplies are purchased by contract intelligently let. The quality of goods is examined by experts before they are distributed to the individual members. This is a chief service rendered by the society; but another valued service is to peasant farmers who have small quantities of products to sell and know neither market conditions nor what is best for them to purchase for use on their farms. Thus the organization disposes of grain for many of its members and advises them concerning the character of the fertilizer which should be purchased.

#### CENTRAL ORGANIZATION OF AGRICULTURAL SOCIETIES OF THE PROVINCE OF SAXONY

This organization includes three branches,—a general branch devoted to the interests of the affiliated organizations, a branch for the purchase of agricultural supplies, and a bank. The general union was founded in 1889 by thirteen provincial dairy syndicates. Under the law it has the right to examine the financial and other records of its affiliated societies or syndicates. Any agricultural commercial society in the district may become a member if it is officially registered and if its rules conform to those of the central union.

A general meeting of members must be held at least once a year. Each affiliated organization has one vote. The committee of management consists of fourteen members, including the president. The office of director or manager is elective. In 1912, 1182 organizations were affiliated, representing nearly 100,000 members.

The purpose of the affiliated organizations and their numbers are enumerated as follows: Rural savings and loaning banks,

692; dairying, 265; buying and selling, 45; electricity, 34; threshing, 33; horse breeding, 16; potato drying, 12; pastures, 11; chicory, 7; alcohol, 6; vegetable and fruit, 5; grain elevator, 5; canned goods factories, 5; egg selling, 5; steam plow, 4; brick selling, 3; starch factory, 3; special cattle societies, 3; acetylene light, 2; motor plow, 2; grinding mills, 2. The list also includes a sugar factory, one slaughterhouse, a bookkeeping society, and some others. The budget for 1912 shows an income of about \$35,000. Twenty thousand dollars is raised from members' subscriptions, \$7,000 from fees for services, and the balance from appropriations from the government and the agricultural chamber.

About fifty person are employed in the office. Much attention is given to the examination of accounts of affiliated societies, twelve inspectors being employed on this work. An office is maintained for the purpose of organizing new societies. It carries on an extensive propaganda work, including the publication of a journal with a circulation of nearly 5,000 copies. A legal office is maintained to adjust legal questions coming up within the union and to give advice to members.

Much attention is given to the development of dairying. Designs and estimates of costs of new buildings are provided. An office is devoted to the promotion of the use of electricity. Experts make estimates of costs of installation, savings to be effected and pass on contracts for the supply of current.

The branch which purchases agricultural supplies was founded in 1890. It has a general assembly also and has about 800 members and 27 employees. A membership may be taken by an individual or an organization. The latter is encouraged by making it difficult for an individual to join this organization when there is a local society to which he could belong. Members take shares, each of which represents a liability of about \$75. The number of shares being taken depends upon the extent of business that the membership represents. This branch now has an accumulation of profits amounting to about \$75,000 and a working capital of more than double that amount. The business transacted in a year represents nearly five million dollars. About forty per cent. of this is in fertilizers and about thirty per cent. in feeding

stuffs; about twenty per cent. in various kinds of grains, and the balance in seeds, fuel, and machinery, the total representing about one-third of the business done in fertilizers and cattle feeds in Saxony; but little business is done in farm machinery because the manufacturers have been particularly active in developing their own markets through agents and there seems to be no pressing demand for this work to be undertaken. The business for this branch is managed by a representative committee, and the immediate management is in the hands of a manager. Local affiliated societies are not compelled to buy of the central society, but it is usually to their own advantage to do so because the larger organization accumulates orders from many sources, secures lowest possible prices on large quantities on account of being able to keep close watch of the market and buying when orders can be placed at the greatest advantage.

Another branch is concerned with banking. It was founded in 1893, when about \$150,000 was loaned by the government to assist in its starting. Membership, again, which numbers 923 members, consists of selected individuals and agricultural organizations. This bank and other similar ones transact business with the Prussian Central Syndicate Savings Bank. One share in this bank costs about \$25 and a member may acquire up to fifty shares. Each share carries a liability of sixty times its value, and credit may be secured on each share up to forty-five times its value. The working capital amounts to over \$5,000,000. More than half of this is deposits in current accounts and about one-quarter represents savings deposits. About five per cent. is rated as business deposits, and less than one-half of one per cent. is credited to the Prussian Central Syndicate Bank. The business of this institution has increased at a rapid rate, the annual turnover amounting now to over \$100,000,000.

#### COOPERATIVE CREDIT

This is a most prominent feature of cooperation in Germany, although other forms of cooperation have been highly developed. Cooperative financial societies do business in the special interest of those who want long term credit for the purpose of buying land

or making permanent agricultural improvements, and others are organized especially for making short term loans to accommodate farmers who wish to purchase fertilizers or seeds and the like, and expect to repay within the course of a year or less. There are about 18,000 local cooperative agricultural banks and these represent a membership of about 1,500,000 persons,—about one-sixth of the farming population. One of the strongest features of the credit societies is the fact that they do not seek to make profits. The credit societies have governmental supervision and more or less governmental assistance. In the case of the larger long time loans, great care is taken to ascertain the value of the security, and in some instances inquiries must be answered satisfactorily as to the proposed use of the funds. In the case of the smaller loans, the largest possible value is given to the character and ability of the borrower; in other words, he is enabled to capitalize his integrity.

The land mortgage credit associations, often referred to as *landschaften* banks, began operations more than 125 years ago. There are now about twenty-five of these associations. Their operations were begun by the organization of land owners who were in need of funds and found it exceedingly difficult or impossible to secure them on individual responsibility or security. These associations raise funds for their members by issuing bonds which are secured by the combined mortgages of all the properties concerned. Thus the bonds which are offered to the public do not depend upon the condition of one farm, but represent the average conditions of many farms whose individual mortgages are filed in the head office. As loans are not allowed to exceed one-half the value of the property, and as these organizations have been in operation a great many years and with the fullest measure of safety, these bonds have come to be looked upon as desirable forms of investment. A person is a member of the association when he secures a loan, and his membership is terminated when the loan is paid and the mortgage cancelled. While these land mortgage credit associations began for the special benefit of the larger land holders, their benefits are now extended to very many small proprietors and loans are made for amounts of even less than \$100 and secured by properties of only two or three acres.

One of the greatest benefits of this system of farm finance is in the fact that the loans, once made, may not be called as long as the borrower keeps his agreement to pay interest and a small percentage toward the reduction of the principal. The latter is so adjusted that the loan may run a long series of years, even seventy, before it is finally paid in full. By covering such a long term the amortization payment is very small and when added to the interest charge makes a total annual payment not larger than is customary for interest alone in many sections of the United States.

Another feature of strength is the organization of the associations. They are conducted in a manner that keeps them in close touch with the agricultural situation and values, so that correct judgments may be reached in connection with applications for aid. In this respect the associations have a great advantage over banks as ordinarily constituted. The bonds of the credit association pay different rates of interest, commonly three and five-tenths or four, in different denominations of \$50 and upward. When a loan is desired it is not made in cash, but in the form of one or more bonds which the borrower himself must sell or dispose of through a bank. The borrower therefore shares the advantages or disadvantages of the status of the money market.

There are other financial agencies through which funds are loaned for the same purposes with more or less variation from the *landschaften* banks, and these are more or less closely connected with the government and aided by the government; for example, some are free from certain types of taxation. Among these other classes are the joint stock mortgage banks which in many respects are similar to the *Credit Foncier* system of France. These are associations of persons desiring to loan money rather than those desiring to borrow.

A *landschaften* bank in Breslau was visited. It is one of the oldest institutions of its kind in Germany and now occupies a large substantial building on one of the main streets of the city. Offices are located on the first floor, with residence quarters for officials above. The higher officers make use of their residence rooms during the winter season. The office of General Director of the association is an honorary position and is permitted to be

held only by a land owner who receives an annual profit from his estate of not less than \$2,500. Other prominent officers of the association also must be owners of estates, and these are apportioned to the geographic districts served by this association. Two lawyers are employed to examine titles of lands. Loans are made on large estates at about one-half their value, and on small farms in proportion to the net yearly income. In 1911 there were outstanding in the name of this association three per cent. bonds to the value of about \$46,000,000, three and one-half per cent. bonds to the value of about \$90,000,000, and four per cent. bonds to the value of about \$18,000,000.

A visit was made also at the offices of the Saxony Agricultural Land Credit Association. Here it was emphasized that loans are made on land values. The values of buildings are not considered because of their uncertainty. Under the law the bonds of the society are permitted as investments of funds of savings banks and minors. Confidential men representing the association are maintained in different locations and they seek the fullest information concerning properties seeking loans. This association pays on its bonds the same interest as it receives on its loans. Its maintenance is derived by a charge of two per cent. against the borrower for changing to cash the bond which is issued to him, which is done by selling the bond on the market. In 1912 the bonds of this association were quoted as follows: Three per cents, 83; three and one-half per cents, 90; four per cents, par.

#### SHORT TERM LOANS

The system under which short term loans may be secured by German farmers, which has now developed so that it overspreads the Empire, is another outgrowth of efforts to overcome conditions that had seemed to be intolerably oppressive. Farmers were in need of funds to enable them to complete their season when crops would be available to sell. It was not sufficient to them to have the same facilities as were enjoyed by manufacturers or merchants, because the farmer's cycle is dependent upon the calendar and cannot be shortened. They needed the opportunity to borrow funds for a period long enough to enable them to secure returns on their expenditure and they needed to borrow the

money from some person or place which could appreciate the actual necessity for the loan and truly estimate the amount which could be safely advanced. Cooperative banks have resulted from these needs. They have not totally displaced other banks, but they must have exerted a great influence upon them.

A German named Raiffeisen established the cooperative idea about the middle of the last century by organizing cooperative banks at several locations. His efforts were in the interest of poor people. He adopted the principle of unlimited liability of members of the society, and although these members were poor the unlimited feature was considered an item of much importance in estimating the reliability of their organization. The plan promoted by Raiffeisen proved to be well adapted to small farmers. The banks thus established receive deposits from members and non-members and pay from three to four per cent. interest on them. Loans are made to members at from four to five per cent. The loans are secured by personal note endorsed by one or two neighbors of the borrower. In some instances mortgages are given. An important feature of this loaning system is the common requirement that the borrower shall state how the money is to be used. Loans are for limited periods, but they may be paid largely at the convenience of the borrower. These societies are not profit seeking. Their efforts are administered with the greatest economy. Frequently they buy or sell articles for members, and in many instances the society may own a costly piece of machinery which is available to members who desire to borrow it.

Most of the local cooperative banks are associated in central cooperative banks which, as a rule, cover geographic districts, such as a state or a province. These central banks bear the same relation to the local banks as the local bank does to its individual members. The central cooperative banks, again, are associated with still larger institutions. Thus, farmers' funds in one part of the German Empire which are on deposit may be made available to farmers in another part of the empire who are compelled to borrow. The larger organizations have government support.

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**FIG. 216. A RURAL COOPERATIVE BANK NEAR DARMSTADT**



**FIG. 217. INTERIOR OF RURAL COOPERATIVE BANK NEAR DARMSTADT**





Some societies determine the credit of individual members and any member is permitted to borrow about seventy-five per cent. of this predetermined amount without having his note endorsed by a neighbor.

The Schultz-Delitsch Cooperative Banks were established principally for residents of towns and are not as well adapted to the farmers' needs as are the Raiffeisen banks. A point which should be emphasized in connection with the Raiffeisen system is that the founder and his followers have always given much weight to the moral standing and the aims of the members, as well as their commercial worth.

The local cooperative bank at Griesheim was visited. Griesheim is situated a few miles from Darmstadt and has about 6,000 population. The bank, established twenty-five years ago, has 170 members and about 2,000 depositors. Members carry unlimited liability, and a member is permitted to hold but one share which costs about \$30. The total capital reaches \$30,000. Of the 170 members, 120 are tradesmen, shopkeepers and gardeners, and fifty are farmers and workmen. The society does a banking business only, not having undertaken the buying and selling of produce. It receives deposits and makes loans, and in both respects deals with members and non-members. Sums up to \$250 may be loaned to residents of Griesheim on their notes endorsed by one person, who is also a resident. The present rate of interest is five per cent. The borrower must be known as a deserving and capable person and usually he must have some real estate. The surety must own real property and be favorably known to the bank. The maximum amount loaned on notes is about \$1,250 and in such a case there must be five securities. Loans usually are for one year, but they may be made for as long as ten years. In case of a long term loan the installment plan is commonly used for making payments; for example, ten per cent. being paid each year towards the reduction of the principal. Loans on mortgages may run indefinitely. The amounts of these are equivalent to fifty or sixty per cent. of the value of the property secured. Interest on these loans in 1912 was four and one-fourth per cent., and though they are subject to a demand for payment on three months' notice, the society has never yet re-

sorted to this method except where interest payments were not being promptly met. Three and three-fourths per cent. interest is paid on deposits of members, and three and one-half per cent. on those of non-members. Depositors may be required to give three months' notice before withdrawing funds, but this requirement is seldom enforced, especially on small amounts. Persons in the neighborhood of the bank are encouraged to open accounts. Representatives of the bank go about from house to house selling tickets for about twenty-five cents, and tickets at half this value. Four times in the year people bring their tickets to the bank and receive credit for their deposit.

This bank is open daily from three to seven o'clock, and on Saturday from three to nine. It has two permanent employees, and a third to help during the hours the bank is open.

A central bank at Darmstadt was visited. Its members carry limited liability and there are restrictions upon the transfer of shares. It receives deposits from, and loans funds to, cooperative societies in its district and seldom makes a loan to an individual. It receives deposits from an individual in large amounts only. Funds are loaned to small societies merely upon their receipt, the unlimited liability of their members being deemed sufficient security. These loans in 1912 were charged at the rate of four and one-half per cent., and societies making deposits were allowed four per cent. interest. The surplus of this bank is deposited in the Prussian Central Cooperative Bank and partly in private banks.

The Central Cooperative Bank of Saxony, located in Dresden, was visited. In 1912 it had a membership of 267 local banks, some of which purchased supplies for members; eighty-five buying and selling societies; seven dairy cooperative societies; twenty-three waterworks societies; and a small number of others interested in the development of pastures, the cooperative use of a threshing machine, the manufacture of starch from potatoes, and such interests. Separate organizations are mentioned, but they are closely affiliated with the central banks, for the purpose of inspections of the local societies, each one of which must be visited at least once in two years. These organizations do considerable propaganda work also in the interest of strengthening present organizations and starting new ones.

### THE IMPERIAL UNION

The union of German agricultural cooperative societies known as the Imperial Union (Reichsverband) is the highest representative of cooperative societies in Germany. It represents all interests of these societies and its function is to promote and extend agricultural cooperation and guard against unfavorable legislation, such as the taxation of societies. The head office is in Darmstadt, where there are twelve employees. This organization publishes the advantages of cooperation, showing farmers how they would be imposed upon except for their own activity. The impositions they mention include particularly usurious rates for small loans and the sale to farmers of products of poor quality. This society has endeavored to secure national laws establishing standards of purity for fertilizers and feeding stuffs and other articles, but thus far without success. It has had to depend upon its own ability to draw contracts, have analyses made and hold dealers responsible. Doing this work successfully is one of the important reasons why cooperation is succeeding so well in Germany.

A report of this union shows there were in 1911 over 19,000 and in 1912 there were over 26,000 agricultural cooperative societies in Germany with about 2,000,000 members in 1912. Ninety-eight of these were central cooperative societies; 16,735 were cooperative saving and loan banks, 2,373 were cooperative buying and selling societies, 3,467 were cooperative dairying societies, and 3,353 other cooperating societies. The cooperative central banks connected with this union granted credit to their affiliated local bank societies to the amount of \$75,000,000 in 1911, as against \$65,000,000 in 1910.

### UNION OF AGRICULTURAL COOPERATIVE SOCIETIES

This organization, now forty years old, located in Darmstadt, has no connection with buying and selling societies. Its chief function is to make inspections of small societies under the provisions of the national law to ascertain if their operations are being fairly and legally conducted. There are about 700 societies interested in dairying, credit, buying and selling, under

its control. Six inspectors are kept in the field all the time. Inspections must be made every two years. Twenty clerks are engaged in checking up accounts of cooperative societies. This society gives very close attention to money transactions. It also gives legal advice to its affiliated societies and conducts some propaganda work. It receives no support from the government, but from the societies which it regulates.

Its operations are managed by one director with an assistant, both of whom are elected for life. Such long terms are exceptional. There is an advisory board of twenty-two members elected by the general membership. This board meets once each year, and oftener if necessary. Its members receive expenses and about \$2.50 a day during the periods of the meetings. The director receives a salary also.

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### DUTCH AGRICULTURAL SOCIETY

This society, with its numerous branches, has about 12,000 members. Each one pays \$1.21 a year and receives a journal each week. Courses of instruction in agriculture, and especially in dairying, are given at the headquarters of the society, and in outlying districts when demanded. Teachers in these courses are commonly school teachers who qualify in their respective subjects. In some provinces these courses are free to all; in others they are limited to members of the society.

A strong branch of the society was visited in Gouda. It has 350 members and holds meetings once in the summer and five or six times in the winter. At part of these meetings lectures are given and at others discussions are held. Sometimes the society conducts excursions to enable its members to see distant places where agricultural operations are being conducted. A department of this Gouda branch conducts an agricultural bank, and another serves as a cooperative buying society, which is said to be needed particularly because there is no fertilizer law in Holland and members who buy fertilizer need such protection as the society can afford. This buying department is affiliated with a large commercial society similar to the powerful organization in Belgium.

Other departments of this agricultural society provide fire insurance, insurance against cattle diseases and against workmen's accidents. The last is affiliated with the accident insurance society described below.

The Dutch Agricultural Society assists in organizing cooperative creameries, herd and stud book societies and cow control societies, all of which develop as independent organizations.

### THE GENERAL NETHERLAND DAIRY ASSOCIATION

This association (known as the F. N. Z., which are the initial letters of its name in the Dutch language) is a federation of 380 cooperative creameries and cheese factories. It receives no gov-

ernment aid. Its purpose is to promote the interests of co-operative dairying in general and particularly to protect the good name and the sale of butter and cheese made in cooperative dairies. Each year it has a one-day meeting and conducts a two-day excursion. No creamery or cheese factory may secure membership in this association unless it is a member of a control station. There are eight of these stations in Holland. They examine samples of dairy products for purity, testing the output, nearly every day. Samples are sent to the control stations by agents of the stations and by buyers of the products. The government controls the stations, gives them a little money, and furnishes official labels which the dairies pay for. The association gives certificates for quality, which is determined both by taste and tests.

#### ASSOCIATIONS IN THE INTEREST OF BETTER CATTLE

There are four kinds of associations of this character:

1. Bull keeping associations, through which members co-operate in the ownership and use of superior bulls.
2. Control societies for determining the amount of fat given by individual cows in members' herds. An inspector visits each farm every few weeks, makes tests and records and gives advice regarding the improvement of the herd. Usually these societies are connected with a cooperative creamery.
3. Local breeders' associations, which keep complete records of cattle on farms of members. A farmer must show that he has a good bull or bull calf before he can become a member of this society.
4. Herd book associations for the entire country, which make regulations for local societies and accept records furnished by those societies when satisfactory.

#### CENTRAL AGRICULTURAL MUTUAL INSURANCE SOCIETY

This organization has headquarters at Amsterdam. Its purpose is to provide protection to agricultural employers against claims on account of accidents to laborers. There is a law regarding accidents to employees in manufacturing plants, and the

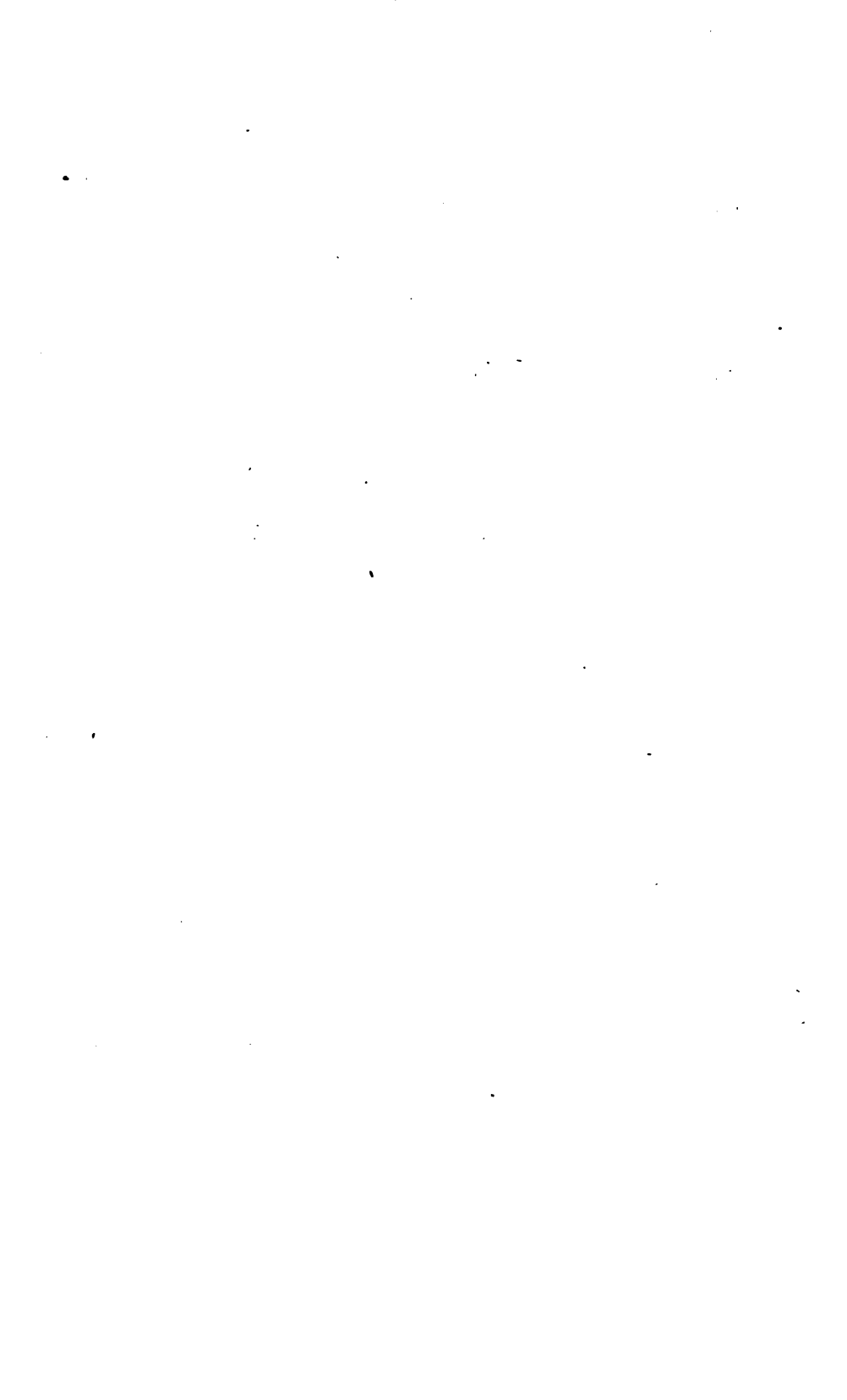
## HOLLAND



FIG. 218. OFFICE AND LABORATORY OF THE BUTTER AND CHEESE CONTROL SOCIETY, THE HAGUE



FIG. 219. COUNCIL ROOM OF THE COOPERATIVE ACCIDENT INSURANCE SOCIETY, AMSTERDAM



farmers, thinking a similar law might be enacted covering agriculture, took the matter into their own hands and established this society with the idea of complying as far as possible with the probably rigid provisions of a law which might be enacted, and thus forestalling the public demand for such legislation. The members wished to retain independence, and their operations seem to show that they can provide the desired advantages and do so at less cost in their own way than would be possible under government requirement and supervision.

There is an affiliated organization in each of the provinces which is administered by its own elected officers. These provincial organizations transact business with the national headquarters at Amsterdam. The provincial offices are connected with smaller district societies, of which there are over 200 in the country. Each district society has its president and secretary, elected by its members who are mostly peasants. The secretary receives less than \$10 a year for his services. This district or local society acts as an accident committee. When a farm laborer is injured, he or his employer fills out a card with details of the accident. This is sent to the member of the local committee who lives in the village. He secures such information as he thinks necessary and sends a card to the secretary of the local committee. The committee may allow insurance payments for the first two months, these being cared for by the provincial society. The central organization has an officer in connection with each provincial society and he may make such examination as seems necessary. All papers and claims are sent to the central organization after the second month if the injured person has not recovered. If payments are to be continued the central office cares for them. It also regulates dealings with the doctors, who also are organized. In the past twelve months there have been 1,365 accidents among employees of members; 1,288 recovered within two months, seventy-seven came to the attention of the central society; five of these received pensions for life, and probably seventeen more will receive life pensions. There were twelve other laborers killed or who died from accidents, and five of these had wives who receive pensions for life.

The central society allows as much as seventy per cent. of the wages paid as damages as long as the person is incapacitated. When a long term claim is allowed, sufficient funds to care for it are deposited in the bank. Pension for widow and orphans cannot exceed sixty per cent. of the wages paid to the husband.

Employers only can belong to this society and the benefits refer only to their laborers. Eight thousand agricultural employers now hold membership. Each member pays \$1.50 a year for each \$100 he pays in wages. This payment is made on an estimate at the beginning of the year and a surplus is returned at the end of the year. Last year one-third of the payment was returned. A moderate entrance fee is collected, which varies in amount, depending upon the number of employees concerned. Ten to fifteen employees is considered a large number; very few have as many as thirty. Most members have only three or four.

It is claimed that this society has an advantage over the governmental pension system, because its affairs are administered largely by the neighbors of the claimant and imposition is not likely under these circumstances. Frequently the school teacher acts as secretary of the local committee. This agricultural insurance society has been organized only two or three years. It started with peasants ignorant of its purposes and much educational work was required to make it acceptable.

A similar society with 6,000 members is devoted to the interests of horticulturists.

There has been started recently a society for insurance against sickness of laborers who live with their employers, because the law requires the employer to pay the cost due to the sickness of such a laborer. And it is proposed soon to start insurance for accidents to employers.

A fourth mutual society, which is yet small, provides protection for its members when claims for damages to property of other persons are brought against them. This society pays its members the amount allowed by court.

All four of these societies have their headquarters in the same building and form a cooperative society for administrative purposes. They have an advisory council made up of one member from each society.

## HOLLAND



**FIG. 220. BUILDING OF THE COOPERATIVE SOCIETY FOR HEATHER IMPROVEMENT, UTRECHT**



**FIG. 221. MILK CART, THE HAGUE**



## THE NETHERLAND HEATH COMPANY

This society was founded in 1888 by the king. It is not a co-operative society, but a company which operates without profit. An ordinary membership costs about eighty cents a year for first-class members, of whom there are over 5,000, and about \$4 a year for donation members, of whom there are about 250. A monthly journal goes to all members and certain additional reports go to donation members.

The main office is in Utrecht. While the principal business of the organization is the improvement of heath land, it is interested in forestry and fisheries also. It receives from the government about \$3,600 for its agricultural work alone, there being no appropriation for forestry and fisheries. Most of the work of the society is on the heath, which is a poor, sandy soil where few plants will grow. There is a large amount of such land in Holland.

The society takes full charge of the property. With the use of oxen, horses, or steam or gasoline power, it plows the heath and prepares the land for cultivation, meadows or forestry. Often lupine is used as a green manure when it is intended to produce arable land. This is supplemented by commercial fertilizers. Such work is done only for members of the society. An estimate of cost is provided, the member makes an advance payment, the society takes full charge and calls for more funds as needed. It makes surveys, examines soils, furnishes maps, advises as to location of meadows, fields and forests, and may even build houses and other farm buildings. For some large land owners it operates the plant. In 1910 the society improved about 4,200 acres.

## VIII IRELAND

Agricultural conditions in Ireland are going through momentous changes. This is largely due to new legislation which permits the tenant farmers to acquire ownership of the land which they occupy on terms with which they can comply. The change from tenancy to ownership is resulting in great improvements on Irish farms. Improvements are being installed which would not be made when the occupant of the land did not know how long he could remain on it. Houses, farm buildings, fences, and methods of farming are all showing betterments because of the change to permanent ownership and occupancy of the land. The modern Irish farmer is referred to as an emancipated man.

### THE IRISH DEPARTMENT OF AGRICULTURE

This government department is a strong force in the readjustment of the affairs of Irish farmers. It does comparatively little in reference to agricultural organizations, but it does much in an educational way and through the expenditure of government funds, often in the form of grants, for the encouragement of better agricultural methods. The department is supported by funds raised in the different counties and by additional funds voluntarily contributed by county councils. The county councils administer local schemes under the direction of the department. They also elect two representatives to a national council of agriculture, which is in effect an agricultural parliament. This meets at least once a year and frequently twice. It has no authority over the Department, but exercises a powerful influence through public opinion. Expenses of delegates are paid by the department. The department may appoint about one-third of the number constituting this advisory body. The members at the meeting may ask the department to do some special work, but it is not obliged by law to comply. There is also an agricultural board which is elected by the councils and which serves as an auditor of funds; it does not initiate work.

## THE IRISH AGRICULTURAL ORGANIZATION SOCIETY

About the year 1889, when Irish farm tenants seemed to be pressed the hardest to make both ends meet; when enormous quantities of agricultural products were being produced in the central western parts of the United States where land was exceedingly fertile and exceedingly cheap, and where transportation systems were being rapidly extended and developed; and at a time when so-called business interests were finding it profitable to take the farmers' products at the lowest prices for which they could be secured; in short, when it seemed that everything looked dark and unpromising for Irish agriculture, a few individuals began to take active measures in the interest of relief. Their efforts were continued more or less independently until 1894 when the Irish Agricultural Organization Society was established.

The objects were stated to be "to improve the condition of the agricultural population of Ireland by teaching the principles and methods of cooperation as applicable to farming and the allied industries; to promote industrial organization for any purposes which may appear to be beneficial, and generally to counsel and advise those engaged in agricultural pursuits." The leaders in the new movement believed that cooperation offered the solution of the farmers' difficult problems and they realized too that much educational work would have to be done to bring about this solution, because the whole idea of voluntary cooperative effort was unknown in Ireland. Besides contending with ignorance, these leaders knew they must suffer the opposition of selfish interests. They believed that cooperation would lead to improvements in business methods and this in turn would bring indirectly many other advantages to the members.

The president of the organization at its inaugural meeting stated that "the keynote of our proposals is the proposition that the Irish farmers must work out their own salvation, and further, that this can only be done by combination among themselves." He pointed out in the same address that there must be more than a mere recognition of the fact that combination is necessary and that when the idea is grasped, that farmers would combine with their neighbors. It would be necessary, without interfering with the farmer's business, to assist him in complying with well-es-

lished principles of political economy, and he used these words: "To bring to the life of those whose life is passed in the quiet of the field the experience which belongs to wider opportunities of observation and a larger acquaintance with commercial and industrial affairs — that, gentlemen, is the object and aim of this society."

A very interesting fact in connection with the efforts in Ireland, and a fact which suggests much to the farmers of the United States is that when the originators of the Irish Agricultural Organization Society had carefully studied the situation in Ireland and had come to certain conclusions as to the best methods of procedure, and after they had made much progress in the movement, they learned that their remedy for Ireland was quite similar to that already being successfully applied in other countries. This served only to increase their confidence in their own plans and led them to still greater efforts.

It is said that the successful business combinations in America, the organization of which had been witnessed and studied by Sir Horace Plunkett, on a visit to the United States in 1889, were in part responsible for the conception which led to the founding of this society. Before its organization some advance had been made in starting cooperative creameries; these had been developed in spite of unsuccessful efforts to promote creameries on the ordinary, joint stock plan.

The Irish Agricultural Organization Society is entitled to great credit for the present state of agricultural organizations in Ireland. This society has offices in the Plunkett House, located in one of the best sections of Dublin. Its president is the Right Honorable Sir Horace Plunkett, who has long been recognized as a leader in the development of agriculture. His interests cover the advance of three phases of the subject which he describes as "better farming, better business, better living." To Mr. Plunkett must be given much credit for the support of the cooperative movement. At first this was limited and the support came, in large measure, from private sources,— mostly from friends of Mr. Plunkett.

The work of the society is largely educational. It is in part responsible for the establishment of the government Department of Agriculture, which is engaged, among its other activities, in pro-

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**FIG. 222. SIR HORACE PLUNKETT AND HIS HOME**



**FIG. 223. A FARMERS' COOPERATIVE BANKER AND HIS HOME AND OFFICE, IRELAND**





moting the teaching of modern agricultural methods. The Organization Society has taken steps to secure conferences with the department of agriculture on questions of common interest, and through appropriate committees.

The organization society has helped to organize nearly 1,000 farmers' societies, with a present membership of about 100,000. These societies usually serve small districts, and it was very noticeable to the writer that they frequently ask for and receive from the parent body guidance and assistance. The largest number of societies, over 300, are devoted to dairying, and the second largest number to banking. The society has organized about 300 cooperative banks. There are more than 150 societies interested in general agriculture, less than 50 each devoted to hogs and cattle, home industries and poultry, and there are a few flax and bookkeeping societies. The annual business done by the various societies in one year amounts to considerably over \$12,000,000.

#### METHODS OF WORK

The general policy of the society is guided by a committee of twenty-four members, one half of whom are elected by the individual members of the society itself and the other half by the affiliated societies. This committee selects the secretary, who is the executive and most important officer. The affiliated societies include those which have been organized through the efforts of the parent society. Skilled organizers are permanently employed to assist in strengthening the societies and to continue the task of organizing additional creameries and other forms of agricultural societies. Experts of the parent society also give technical advice, such as upon the manufacture and sale of butter, the care of machinery, and matters concerning water supply. Some experts devote their time largely to agricultural financial questions, including the organization of agricultural banks. A staff of accountants is employed to instruct societies in simple and efficient bookkeeping and business methods. Numerous leaflets and bulletins are published and widely distributed. These include articles on different phases of cooperation, covering poultry keeping, flax cultivation, credit, bookkeeping, cattle insurance,

dairying, creameries, and helpful treatises on general subjects, such as rural civilization, plain talks to Irish farmers, village libraries, and addresses by prominent workers. Some of these publications are printed in the native Irish language. *The Irish Homestead* is a monthly paper devoted to the interests of this society and is performing a most valuable service.

The published reports of the organization show that the income includes affiliation fees and special subscriptions from banks and societies, but the chief item is made up of individual subscriptions, which, in one year, exceeded \$10,000. One subscriber deeply interested in the work of the society contributed \$2,000; a few others \$500 or more, and a considerable number contribute as much as \$50. This list includes a large number of five dollar subscriptions. Effort has been made to secure support from the government under the provisions of the act in the interest of organization and cooperation of farmers.

The officers of the society report to the subscribing members and affiliated societies. Recent reports show a steady, continued growth, but it is pointed out that development has been retarded recently by a shortage of funds and uncertainty as to the future. The secretary of the organization calls attention to the difficulty of securing exact statistical information from the various societies whose officers often are poorly paid, if paid at all. Lists of the newly organized societies are published.

#### COOPERATIVE CREAMERY SOCIETIES

At the close of 1893 thirty cooperative creameries had been organized and very little if any other cooperative efforts were under way, but with the starting of the organization society in 1894 new impetus was given to the movement. The farmers controlling the thirty cooperative creameries estimated that profits from their cows had increased about one-third from what it had been previously, and credit for this increment was readily given to cooperation. Such successful examples as these creameries furnished throughout Ireland, led to much discussion among dairymen and farmers and a willingness on their part to assist in the extension of the cooperative idea. Self-confidence was



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FIG. 224. IRISH COOPERATIVE CREAMERY



FIG. 225. FARMERS' COOPERATIVE BUYING SOCIETY

developed when it became known that butter factories could be successfully conducted by the farmers themselves, with a probable improvement of the product. Irish butter has not had an enviable reputation because of previous inferior methods and its resulting poor quality. Ten to fifteen new organizations of this kind now are brought into existence each year, and help is extended to a large number of others already formed. An instance of service of the national organization society is related in connection with an objectionable government order concerning dairies, cow sheds and milk shops. Different cooperative societies took action in opposition to this order and a committee of the organization society, accumulating these actions, emphasized them and showed wherein the order was unfair, because of its discrimination against the creamery industry. The committee keeps in touch with the Irish Department of Agriculture in connection with proposed legislation, and offers amendments which are agreeable to the department. Considerable attention has been given to pending legislative questions, with the result that the creamery interests of the country and their needs have been brought to the attention of responsible officials.

The organization society has called attention to the importance of the study of certain questions in which all creameries are interested, such as the proper disposition of waste water containing a small amount of milk from washing utensils and tools, and has informed creameries as to the best systems of water supply, improved methods of feeding cows, including information concerning ensilage, etc. A study of the relative merits of ensilage feeding on the American plan and a study of the system of winter feeding without ensilage as practiced in Denmark, has been recommended to the Department of Agriculture. The creameries are instructed as to the desirability of extending winter dairying, as to best methods of producing high class butter throughout the year, and attention is called to the competition which Irish creameries must meet in the British markets. A plea is made for the improvement of the dairy products for the reason that Irish products should hold a high position wherever they are found.

A number of creameries have been brought under a special control system which includes regulations covering the whole process of buttermaking and creamery management. Special labels are issued to these creameries and when one fails to maintain the standard its use of the labels is suspended. The chief requirement is that butter shall be made from pasteurized cream ripened with the aid of a pure culture. Samples of butter, cream and water from the controlled creameries are examined frequently for bacteria content. A sample from each churning is held for this test. Chemical analyses are also made. The advantages following the strict rules of the control system and checking of these in the bacteriological and chemical laboratories were very pronounced during a dry season when creameries generally experienced difficulty in operation because of low water supply. The creameries which were in this system and had followed the rules readily overcame the temporary difficulty. Starters for ripening the cream are sent regularly to the control creameries. The main purpose of the control system is to place on the market as large a quantity as is possible of the highest grade butter under a recognized and protected label, with the expectation that such butter will command its own good price. It is proposed to educate the trade to the view that the label is a guarantee of both purity and quality. Already steps are being taken to secure a special quotation for butter from these controlled creameries.

The Organization Society gives attention also to the improvement of dairy cows by means of testing all the animals in the herd, removing those that are unprofitable and filling their places with others known to be profitable. Circulars call attention to the fact that one cow in a herd may return as much, as \$60 worth of product while another returns but \$20 worth, the owner being ignorant of the great difference until he has adopted the plan of the society of recording the product of each cow. The society publishes enthusiastic statements as to the possibility of increasing profits by improving cows, thus taking a long step toward revolutionizing the whole dairy system of Ireland. It is pointed out that a twenty-five per cent. increase in the milk yield of all dairy cows would mean an increased income of about \$2,500,000 per year which would be added to the wealth of the country.

The Organization Society is constantly alert to promote the best interests of Irish creameries and milk producers. Every feature of their business has its consideration and sympathy. Through its own agencies as much is done as possible to this end. It refers to other agencies what it cannot itself perform. For example, it referred to the United Irishwomen's Society the absurd charge, but one apparently believed by many people, that the development of creameries was resulting in diverting milk to the manufacturer of butter, thus taking it off the market and so "starving the children." The Organization Society pointed out that if milk is purchased at a slightly better price than is yielded by the creameries it would be available in any quantity and even at that price would be one of the cheapest foods on the market; but the whole question was assigned to the other organization for the purpose of setting the public right.

Some Irish creameries were visited and it was very noticeable that the cooperative plants had better equipment and a larger and better satisfied patronage than the older, private plants. One of these creameries with 150 patrons, near New Ross, receives about 3,000 gallons of milk daily in summer, but nothing in winter. This creamery handles also, for its patrons, fertilizers, seeds and coal. Its members are not bound to bring all their milk, but they do so anyway, and receive a small bonus above the price paid for a small amount of milk purchased from non-members. There is an annual meeting for all members and a monthly meeting of the directors. This creamery and its equipment cost about \$12,000. Each member took stock valued at \$5.00, one-quarter of which was paid. The balance of the funds was borrowed from the bank. Milk is purchased on the fat test. In July, 1912, farmers received twenty-six cents a pound for fat, including the skimmed milk. The milk is heated to 130 degrees before separation. In this section farmers pay from \$1.50 to \$2 per week with board and lodging for labor, when employment continues throughout the year. In harvest time they pay for temporary help about sixty-five cents a day which includes board and lodging. Prices range somewhat higher in other sections. The manager of this creamery is also the manager of a cooperative threshing society.

## THE IRISH COOPERATIVE AGENCY SOCIETY

This society with headquarters at Limerick, began work in 1893, thus being a little older than the Organization Society. It started with a membership of only a few creameries, but now does business for a large number. It handles the product of its own members on a commission of two and one-half per cent. and collects three and one-half to four per cent. for doing business for others. Several traveling salesmen are kept in England and Scotland. Efforts are being made constantly to build up the dairy business by increasing the output of high grade butter and increasing the demand for it in the large markets. Each creamery must take stock valued at about \$100, of which one-fourth is paid for. The trading capital of the society is about \$50,000. It has never had to call for further payment on the shares. Its finances have been assisted to a considerable extent by wealthy men who contributed because they were interested in the purpose of the organization. Expert buttermakers are kept in the field and when a creamery experiences any operating difficulty, one of these men is sent to give assistance. This work is done in cooperation with both the Irish Agricultural Organization Society and the Department of Agriculture. Members send their butter either to Limerick or to a branch at Belfast. In cases where the creamery is known to be reliable it is allowed to make shipment, under the society's guarantee, direct to the customer.

Creamery requisities are handled by the agency for the special accommodation of members and this business is done at a moderate rate of profit, which eventually goes to the stockholders. From this business the principal profits are derived.

## POULTRY SOCIETIES

The Organization Society points out in its reports that the poultry business belongs largely to the women of the farm. In respect to these societies, cooperation is urged on the part of the United Irishwomen. The statement is made that the poultry business is not well looked after. Too many hens are producing seventy-five or a less number of eggs a year and this yield could and should be doubled. Furthermore, the production of eggs in

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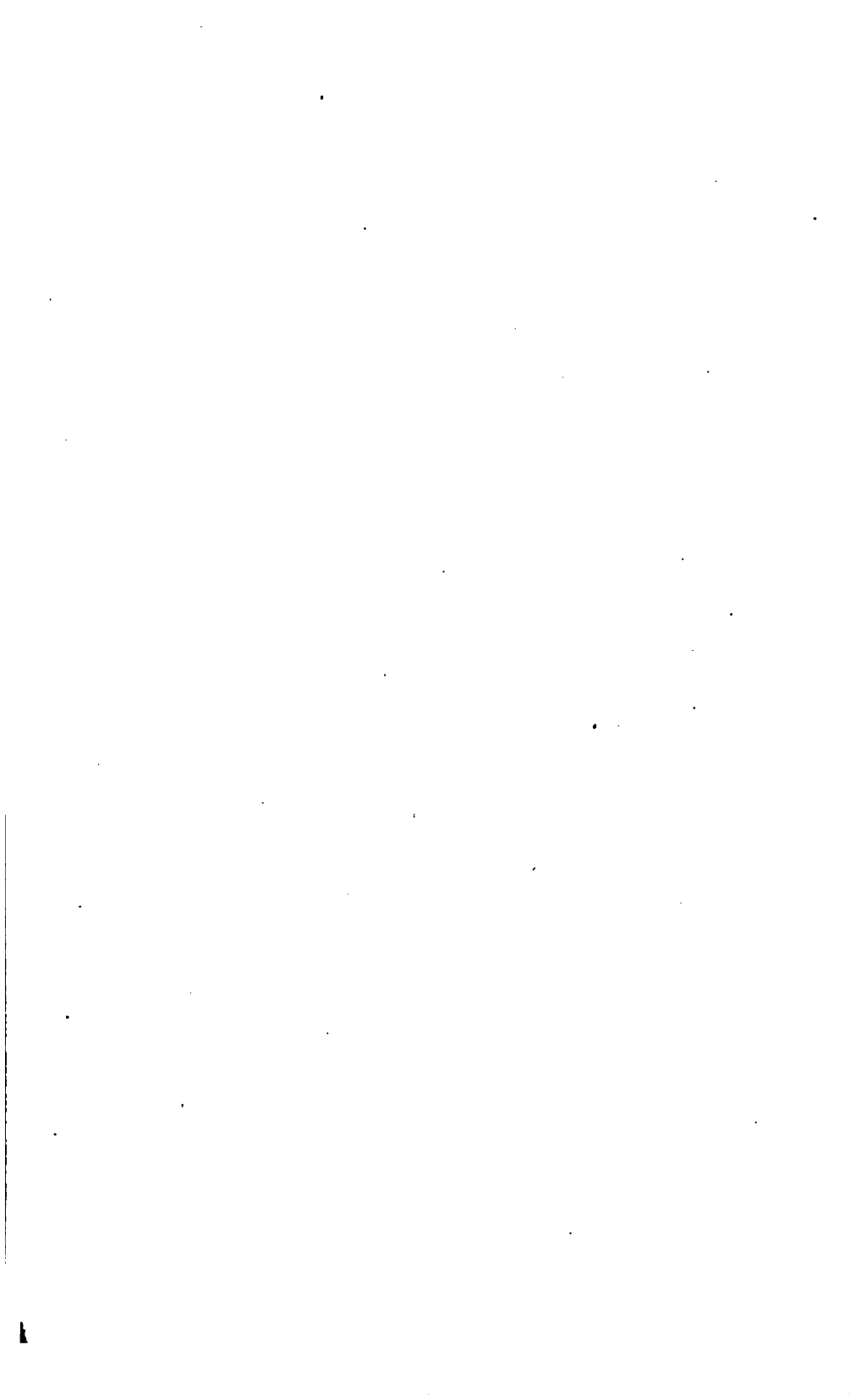


FIG. 226. HEADQUARTERS OF FARMERS' COOPERATIVE POULTRY SOCIETY AT BALLYRAGGET



FIG. 227. FARMERS' COOPERATIVE BACON SOCIETY AT ROSCREA





winter could be greatly increased. The report of the Organization Society points out in plain language the poor standing of Irish eggs in the British market, because it is said they are too often stale, dirty, badly packed and poorly graded. Some packers have adopted the practice of using neat packages but with very little care as to their contents, and the injury of this upon the whole industry is emphasized.

About twenty-four poultry societies are buying and marketing their members' products, with a total annual turnover of about \$340,000. The influence of these societies has been marked in the interest of better packing and grading, buying by weight, and the selection of hens of superior laying qualities. Through these societies the farmers are enabled to supply the British market with strictly fresh eggs, which was impracticable under the old system.

The North Kilkenny Poultry Society was visited. This has been in operation since 1905. There are 490 members who have taken one or more shares of stock each; the shares costing \$5.00 each. Members pay half of this amount and it is not expected that more will be called for, as the organization is in a highly flourishing condition. The eggs are bought and sold by weight except in a few localities where the farmers still insist upon selling by the dozen. Members of this society are not obliged to deliver all their eggs to the society. The product is marketed through a cooperative wholesale society in Dublin.

Fowls are bought on their appearance, not weight. They are killed, plucked and drawn, with head and feet unremoved. They are then carefully packed and shipped to English markets. The annual sales of poultry and eggs amount to about \$40,000.

This society also handles fertilizers, seeds and linseed and cottonseed meals. A stock of these articles is kept on hand and buyers call for what they want. The society has grinding machines for oil cake and it lends to its members without charge machines for distributing fertilizers, the use of which is increasing. This outside business amounts to about \$4,000 a year.

The society owes its start and prosperous condition largely to the efforts of a few leading farmers and clergymen, these latter taking as many as five shares, while small holders usually took but

one share. The business is run by a committee of twenty, elected at the annual meeting. This committee meets monthly and the meeting usually lasts about two hours. A sub-committee meets weekly. Office accounts show the amount of business done each week, with profit or loss for the week.

#### SWINE SOCIETIES

Efforts are being made to organize and encourage cooperative slaughterhouses and bacon factories. Almost every parish has its separate society of this kind. The members of these societies are obliged to agree to furnish a certain number of hogs annually. They take shares valued at about \$5.00, some paying in cash and others following deduction to be made from their deliveries of hogs until the shares are paid for. In each parish society there is a committee which reports any member who does not supply his hogs as agreed, but if one fails to keep his agreement for a good reason, he is excused. Usually the hog society requires members to deliver only about one-quarter of what they produce. As yet members have not entered into an agreement to bring in a definite amount of beef.

One of the most successful cooperative bacon factories is located at Roscrea. It has 4,000 members, each one of whom agreed to bring all his hogs to the society for a period of five years. It is said that it has never been necessary to resort to strict measures to attempt an enforcement of this agreement, and the original agreements having now expired the society is doing business in the open market. The average number of shares taken by members is three. Some took as high as 20 shares, at about \$5.00 each, and these are fully paid in. A board of directors manages without salary the affairs of the society. No other business than handling pork is done. Some members are paid cash and others wait about a week for their returns. The market is in London, where an agent is maintained to serve this and other cooperative societies dealing in eggs and other products. Meetings of stockholders are held twice yearly but are not well attended. There are twenty-six parish societies, which are permitted to have a representative. At an annual meeting, reports of operations of the main society and reports of affiliated societies are received and

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FIG. 228. EGG COLLECTOR OF THE FARMERS' COOPERATIVE SOCIETY AT BALLYRAGGET



FIG. 229. EGG PACKING ROOM, FARMERS' COOPERATIVE SOCIETY AT BALLYRAGGET





twelve directors are elected. Representatives of the affiliated societies elect officers. A sub-committee of directors meets every Friday evening to go over accounts and authorize payments.

This organization encounters its difficulties in regard to maintaining an even supply of hogs throughout the year and on account of insufficient capital. Dividends have not been paid, but it is expected they will soon commence. An expert organizer is kept in the field among the farmers to give lectures on better methods in swine husbandry and to advocate especially the use of better sires. The Department of Agriculture gives grants to assist in buying these sires, on condition that the boar qualify under department rules.

#### BUYING AND SELLING SOCIETIES

These are called agricultural societies, and there are now nearly 200 of them. Some of these societies are doing a large business and most of them are well supported by their members, because of advantages secured through buying in quantity and final retail sales to the small farmer without the addition to the buying price of more profit than is absolutely necessary. Some of the societies have erected buildings and carry large stocks. Most of their business consists in buying articles which are resold to the members, but some of them are also purchasing the more expensive kinds of machinery and renting them to their members. Commonly these societies are affiliated with the Irish Agricultural Wholesale Society (mentioned more at length later), which is showing itself to be as advantageous to the individual organizations as these latter are to the individual members. The Organization Society officers point out that in too many cases the farmers in a locality fail to loyally support their own organization, but make use of its favorable terms to compel local dealers to reduce prices to an equal or more advantageous level. Thus the effect of the cooperative buying society is to lower prices generally in the neighborhood.

In a small way these societies are selling farm produce, including live stock, for their members, but little advancement has been made in this field of their work. The societies are not doing as much as they might to keep their members advised as to the state of the markets, and difficult competition is encountered from the

keen business men who long have been training themselves and whose personal interests are so vitally at stake.

The Innescorthy Cooperative Society was one of the most interesting of these buying and selling societies visited. It is twenty years old, and quartered in a large but modest building, which occupies a convenient but inexpensive location and provides warehouse and stores for products.

There are about 950 members, each of whom must have a share in the company, no membership fee being required. The subscribed share capital is about \$11,000, about half having been paid in. The affairs of the society are managed by a board of thirty members, which meets two hours every week in a plainly furnished room maintained for this purpose.

The balance sheet for 1912 shows the total assets and liabilities to be about \$85,000 with a stock in trade valued at about \$35,000, and land, buildings and fixtures worth about \$12,000. The chief work conducted is as follows:

The sale of fertilizers, which are handled through an arrangement with the Irish Agricultural Wholesale Society; seeds, farm implements, harness, shoes, and insurance. The society also sells for its members butter and meats. In the harness shop fifteen men are employed, and sales of harness are made to outside merchants.

About one ton of dairy butter was brought in on the day of the visit. It was purchased by the representative of a concern who came to Innescorthy by appointment and who paid for the butter according to its quality.

While the society does more or less business with persons who are not members, the members have the advantage of receiving dividends at the end of the year.

The County Wexford Beekeepers' Society is given by the Co-operative Society suitable space to which members bring their honey and meet buyers. The members of the beekeepers society cooperate in packing and marketing their product.

#### THE IRISH AGRICULTURAL WHOLESALE SOCIETY

This organization is a federation formed by the buying and selling societies for the joint purchase of supplies and selling of

products. The headquarters of this society are located in Dublin. It forms an important part of the complete plan of agricultural cooperation in Ireland. A wide variety of articles is handled. The report of 1913 shows that in one-half year the feeding-stuffs business amounted to about \$35,000, groceries \$35,000, implements \$15,000, spraying materials \$10,000, fertilizers \$250,000, poultry and eggs \$125,000, honey \$10,000, seeds \$20,000. This represents a large increase of business over the previous year. The business of the organization as a whole has shown healthy growth in recent years. In 1906 it amounted to about \$250,000; in 1908, about \$365,000; in 1910, about \$615,000. The president of this society is a manufacturer who is deeply interested in the advancement of cooperation. Membership in this organization is chiefly agricultural.

#### CREDIT SOCIETIES

The Irish Agricultural Organization Society is interested in establishing credit societies or agricultural banks, because of difficulties experienced by farmers who have needed to secure small loans or who have met with misfortunes because of attempting to have their credit carried by local traders. It is said that this latter condition has cost many farmers their farms and their independence. About 300 agricultural banks are in operation. These are cooperative associations of farmers and the members jointly are responsible for the safety of funds received. On this joint responsibility the bank may borrow funds at a reasonable interest and this money is loaned to members at a rate slightly above what it paid itself. Money is loaned for productive purposes only, which must be passed upon and approved by a committee before the loan is granted. Payments of loans may be made in installments or all at once as best suits the situation.

At Ballyragget there is an agricultural bank society organized ten years ago and having 160 members. No other bank is located at this point and formerly the farmers were obliged to use a joint stock bank in a distant town, or the local postoffice bank. This one was organized principally for borrowers who formerly found it difficult or impossible, on account of high interest and costs, to secure funds elsewhere. For example, a borrower wishing to get money from the distant village bank had to pay his fare and ex-

penses and submit to incidental costs, and he was obliged to renew his note every three months. The charges were so great that on a loan of less than \$100 the borrower would receive only about eighty per cent. of the amount to be repaid. The interest had to be paid in advance in addition to the several items of expense mentioned. The member making application must fill out a form giving a statement of the purpose for which the loan is desired, and the application must be signed by two sureties,— usually neighboring farmers. Loans are made also to laborers. In this case fellow-laborers are accepted as security. These loans may run as long as twelve months. The funds loaned usually come from joint stock banks, but when the local bank was first started it received \$500 from the federal government Department of Agriculture on which was paid three per cent. interest. That loan now has been returned. The society has gained in strength and all of its funds now come from local capital. For the first two years practically nothing was furnished locally. There are now numerous depositors, their total deposits amounting to about \$7,500. The committee of management has deposited security in a joint stock bank permitting an overdraft of \$1,000 if needed, but this has not been called for during the past two years. The committee which gives this guarantee consists of seven or eight farmers who act purely in the interest of public spirit. It is said that the clergy assisted greatly in bringing about such generous action. When the bank was first organized, loans were limited to about \$50. They then were increased to \$100, and now the limit is \$150. Money is commonly borrowed for the purchase of seeds, cattle or fertilizers. The depositors receive three per cent. interest and borrowers pay five per cent.

The secretary-treasurer is the one paid official of this bank and he receives about \$50 per year. The government auditor comes once a year to examine the balance sheets and records. Profits for twelve years amount to about \$140, and it is now thought that interest on loans will have to be slightly increased. The bank business is done in the residence of the secretary-treasurer, neither a regular office nor office hours being maintained. The parish priest is at the head of a committee of eight members which is in direct charge. This committee meets twice a month. Only once have the persons who became security on a loan been obliged to make pay-

ment. Persons wishing to become members must apply and be elected. The fee is about twelve cents. Men and women are both eligible and it is said no one applying has been rejected.

#### THE UNITED IRISHWOMEN'S SOCIETY

This organization was formed for the special benefit of women in rural Ireland and the Irish farm homes. It cooperates in various ways with other organizations. It was established four years ago with the aid of the Irish Agricultural Organization Society. Special attention is being given to conditions that have led to the emigration of young women and girls. Local societies are being established and women are becoming interested in new efforts for making the home life more attractive. In one place strong support is given to a cooperative buying and selling society; in another, the women are helping to increase the activity of a bacon factory; elsewhere, cottage industries are being revived, and in most places home affairs are receiving much attention. Laborers are encouraged to set out fruit on the grounds about their homes and prizes are offered for the best appearing grounds and houses. Experts are placed at the service of distant communities for short periods and in this way new thought is introduced, and organizations which should become permanent are established. The officers of the United Irishwomen's Society are finding repeatedly that communities have great advantages at their disposal but need a stimulus to make use of them. In the short time that this society has been in operation it appears that it is amply justifying itself.

## IX ITALY

### THE INTERNATIONAL INSTITUTE OF AGRICULTURE

An agricultural organization in Italy which is of great interest to agricultural people everywhere is the International Institute of Agriculture at Rome. The idea of such an institution was presented by Mr. David Lubin, a citizen of the United States, to different governments without success until it was presented to the king of Italy in 1904. A royal proclamation was issued in 1905 calling upon the nations of the world to send delegates to a conference with a view to establishing an international headquarters for the consideration of agricultural questions of world-wide importance. The discussions at the conference led to a treaty which has been ratified by many different countries. For the use of the newly established institute, the king of Italy erected a substantial building costing about \$200,000, in an attractive park just outside of one of the old gates of Rome. The Italian government contributes liberally toward the support of this institute, but funds are provided also by the numerous cooperating governments, including the United States. In 1908 delegates from various governments met and adopted by-laws. A staff of experts began to be recruited in 1909 and the real work of the institute began in 1911.

The representative of each nation is known as a delegate and they constitute a permanent committee which meets each month. They are in direct charge of all affairs. A general assembly made up of special representatives of the different nations meets every second year to audit accounts, approve the budget and issue general instructions to the permanent committee as to the work to be followed.

The interests of the Institute extend to all parts of the world and its principal branches of work are classified as relating to statistics, technology, and economics. Bulletins are issued each month, appearing in the Italian, French and English languages. A library is maintained and agricultural reports and periodicals are received in very large number.

ITALY



FIG. 230. INTERNATIONAL INSTITUTE OF AGRICULTURE, ROME

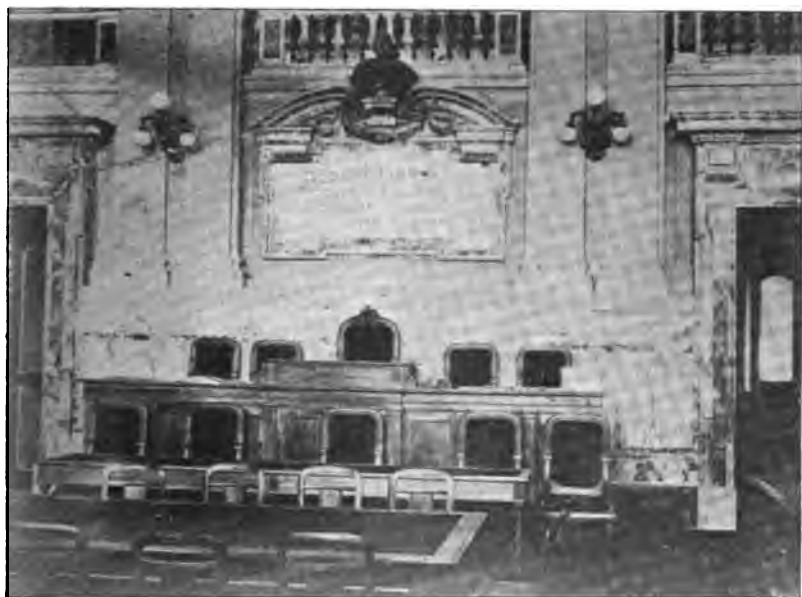


FIG. 231. ASSEMBLY HALL, INTERNATIONAL INSTITUTE OF AGRICULTURE, ROME





The work of the division of economics is divided into four parts: cooperative associations, insurance, non-cooperative credit and miscellaneous. The staff of this division includes thirteen abstractors who are selected because of their familiarity with different languages and the conditions in different countries.

The division of statistics has twenty employees, including twelve abstractors and expert statisticians. Its work is divided into two special branches, production and commerce. The former section has issued numerous publications. The most important statistics are received from different governments by cable and when information is deemed of sufficient importance, supplements are issued. Leading newspapers of various countries have made arrangements to utilize the information compiled by the institute and special codes have been prepared so that the reports may be sent by telegraph. The value of the information concerning crops and agricultural conditions in all parts of the world which is issued from this center must be very great by reason of the fact that no single government or interest is in control. Especially will the value of the reports be appreciated as the institute becomes more efficient and it becomes better known that these reports are carefully prepared by highly qualified experts.

There is a wide variation of agricultural conditions in different parts of Italy. Large areas are owned by individuals. Much land is rented, and a part of this without provision to protect the land from depletion. Many of the farms are rented to careful men who carry on their work under certain supervision. In some cases the product of the farm is divided between owner and occupant. In some sections of the country, especially in the north, there are large numbers of small farms intensely cultivated. In Northern Italy, especially, one observes that farming is a profitable industry. There is much here to be learned to advantage by American farmers, including the use of sewage, irrigation, the use of commercial fertilizers and superior methods of tillage.

The government assists in agricultural development through the maintenance of experiment stations, several special schools of agriculture, and departments of agriculture in two of the

universities. At some of these schools special efforts are made to conduct farms on a practical and profitable basis and this fact alone does much to commend them to the thrifty peasant farmer who has sons needing instruction.

Traveling experts are paid from government funds who work in more or less close cooperation with agricultural organizations. Their services are freely available to very many farmers. They visit farms and give direct advice as to better methods of feeding, field management, and in other practical subjects. The government offers prizes in connection with its efforts to encourage the use of tuberculin in dairies. Official veterinarians assist in making the tests and this is often voluntarily called for. Cattle coming in from Switzerland must pass this test. A government law provides for the approval of bulls which are used for public service. This is a very old law and now has been adopted by more than fifty provinces. A special commission considers the health and quality of the bull, but not his breed. Government assistance is also given in connection with maintaining a superior stallion service.

Appropriations are made to assist in checking diseases of the grape, which is the most important crop; for investigating the possibilities of artesian wells; to encourage forestry, and to further develop agriculture in some sections of the country.

An exceedingly interesting way in which the government is promoting agriculture is through instruction in the army. Compulsory military service brings into the army large numbers of young men and at the chief centers there are maintained by the government teachers who give lectures and demonstrations, including the management of farm machinery, the pruning of trees and other practical farm operations.

The government provides but little legislation to protect farmers from adulterated fertilizers and feeding stuffs; their chief protection in this respect is provided through the cooperative societies.

#### ITALIAN AGRICULTURAL SOCIETY

This organization has about 2,000 members who pay about \$5,000 a year as membership fees. Its scope is broad. Questions

of countrywide importance to agriculture are considered but local matters are not ignored. A meeting is held once each year at different places, usually lasting several days and with an attendance of between 100 and 200. Subjects which have been discussed include breeds of cattle best adapted to different sections, plant diseases, development of agricultural organizations, forestry, agricultural legislation, grapes, silk production, and wheat. Bulletins are issued every two weeks. The secretary is paid about \$1,200 a year.

The income of the society is as follows: from membership fees, approximately \$5,200; subscriptions to bulletin, \$160; advertising, \$120; interest on investments, \$400; fees on analyses, \$300; sale of publications, \$120; income from reserve fund, \$640; total, \$6,940. The total capital of the society is about \$16,000.

In 1912 it started a new activity in the form of an agricultural fair to be held annually in Rome. The railroads give liberal reductions in favor of this fair. Smaller fairs are conducted at various points by local societies which are given some government assistance, as well as the larger fair.

The national society is interested in the work of the traveling teachers and more or less closely affiliated with them, but while the instructors are given considerable liberty they are finally responsible to the Ministry of Agriculture. One of its most important duties is to advance cooperation.

The subject of cooperation is given much prominence in at least one of the higher institutions of agricultural learning. The professor of economics gives instruction in the fundamentals of cooperation and he points out that the success of farmers' organizations depends upon its own members and their loyalty and fairness. For example, organizations interested in the sale of products must first of all be sure of the quality of what they are selling. Thus far, little progress has been made in connection with cooperative sales of farm products. Efforts to develop markets in Germany and Austria have failed. There has been some success in Italy at points where the middlemen were so very numerous that large savings were effected by their elimina-

tion. But there has been no success in the total elimination of the middlemen. The handling of fruit has not been put on a good cooperative basis. Most fruit growers sell to the nearest buyers.

An example of the success of cooperation is furnished by a silk worm society which has succeeded because of the superior facilities it could furnish the members for killing and drying. Cooperative dairying is successful, because of the advantages of handling large quantities; there are about 1,000 of these societies. One was visited at Soresina. It is said to be one of the largest cooperative dairy plants in the world, receiving as high as 100,000 pounds of milk a day. This plant is about eight miles from the nearest railroad. It has been very successful and has crowded out private plants in the neighborhood. Profits have been sufficient to pay for the large investment which the plant represents. Milk is delivered twice daily. No skimmed milk or whey is returned to the patrons; all of the constituents are used. Its manufactured products include butter, cheese and milk sugar. A cheese product is made from whey, and for as long as twenty years butter has been made from the fat saved from whey by means of the centrifugal separator. As much as 500 pounds of whey butter is made daily. It is said that nothing contained in the milk is lost except the vapor from the milk sugar evaporators!

There are 146 stockholders in this society, all living near by and under agreement to supply their product for thirty years. The society conducts a store also from which some articles most commonly needed are sold to members at cost prices. Adjacent to this plant and cooperating with it there is a silk cocoon drying house for the use of the members.

#### THE ITALIAN FEDERATION OF AGRICULTURAL ASSOCIATIONS

This federation, organized in 1892, occupies a very important and prominent position in Italian agriculture. It has the support of large numbers of small farmers and the assistance of men prominent in the nation. For a long period the president was a prominent member of the highest legislative body in the country.

## ITALY



FIG. 232. CHEESE MAKING ROOM, FARMERS' COOPERATIVE DAIRY, SORESINA



FIG. 233. MILK DELIVERY WAGONS, FARMERS' COOPERATIVE DAIRY, SORESINA



ITALY



FIG. 234. FARMERS' COOPERATIVE ASSOCIATION MACHINE STORAGE HOUSE, PIACENCIA

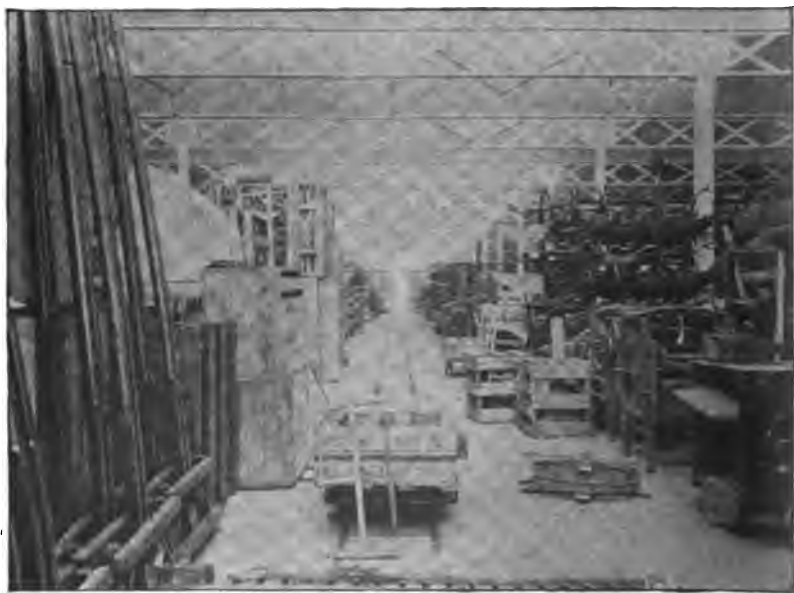


FIG. 235. FARMERS' COOPERATIVE ASSOCIATION MACHINE STORAGE, PIACENCIA

The main office is in Piacencia. Branch offices are maintained in Rome, Naples, and three other cities. About fifty employees are in the main office and about fifty others in the branches. No aid is received from the government, and none is wanted. The running expenses of the federation are about \$60,000 a year. The capital is only about \$30,000 and the reserve fund less than \$20,000. One reason for the low capital is due to the system of taxation.

The value of the goods purchased by the federation in one year, a very large part of the purchase being imported, amounts to over \$3,000,000. The purchases include large quantities of nitrate of soda, Thomas slag, and potash. Shipments are made direct to the main establishment or to one of the branches, and the shipments are only what has been ordered in advance by members. It is said that this federation does about one-half the business of Italy in farm machinery. Its warehouse at Piacencia contains a great quantity of plows, hay-making and other machinery. The sales in one year amount to over 8,000 plows, 1,500 mowing machines, 1,000 hay rakes, 100 hay tedders, 500 seeders, and 600 binders.

Dealers in farm machinery strenuously objected to the growing activities of the federation and opposed it by holding down their own prices to the lowest possible point for an extended period. Their opposition proved to be useless and now dealers and federation are working in harmony. It is freely stated that if the federation were to quit business the prices would be greatly increased immediately. When the federation began to handle machines, the prices of certain machines were greatly lowered. Another advantage of the federation is that it keeps up the standard of agricultural machinery. Attention is given to the real needs of the farmers and the kind of machines best suited are advocated. This federation does not make any attempt to sell farmers' products.

There are 686 societies in the federation; 420 of these are exclusively for buying articles for their members, having an average membership of 297, one possessing 1,560 members. Two hundred and sixty-six of them are smaller societies, not exclusively for buying. Each society must have a share in the

federation, worth about \$4. Most of the sales to the societies are for cash or notes. The local societies have an arrangement with the local bank to advance money on the security of their members charging for the loan about four and one-half per cent. interest. Usually members can get their purchases on credit. Great assistance has been given to the farmer members by the federation buying superior seed and making this available at reasonable prices. The work of this federation has attracted wide attention. Fourteen factories for grinding fertilizer are working in cooperation with it. There are also cooperative feed grinding factories where imported oil cake and other feeds are handled.

The internal organization of the federation provides for sections on administration, organization and propaganda work. Delegations from foreign countries frequently visit Piacencia to study its operations.

#### ASSOCIATION OF FRIULI

This association was started in 1855. It operates in one of the prosperous northern provinces and has very firmly established itself by its undoubted value to its members. There are now 600 members, each one paying an annual fee of about \$4. The smaller societies pay the same as an individual member. For this they receive a weekly publication and a bi-monthly publication. The society sends out formulas for mixing fertilizers. It gives advice on combatting plant diseases, the introduction of machines, and advocates better seeds and better methods generally. It collects orders for fertilizers, spraying materials, machinery and other supplies from the smaller affiliated societies and forwards these orders to the national federation at Piacencia. In recent years the association has introduced superior bulls from Switzerland. Some of these are loaned to local societies. A central warehouse is maintained in Udine, where a stock of plows, milk utensils, wine apparatus, cultivating and harvesting machinery, and hardware is kept on hand. The sales of one year amount to about \$500,000, the machinery alone being worth about \$75,000. When this association began operations it at once cut the prices of some important articles as much as fifty per cent. below what private dealers had been charging, and even now its charges run several per cent. lower.

ITALY



FIG. 236. FARM MACHINERY, FARMERS' COOPERATIVE ASSOCIATION, PIACENCIA



FIG. 237. AN OFFICE ROOM, FARMERS' COOPERATIVE ASSOCIATION, PIACENCIA



ITALY



FIG. 238. FARMERS' COOPERATIVE ASSOCIATION FEED MILL, PIACENCIA.



FIG. 239. COOPERATIVE GRAPE NURSERY, CIVIDALE.

## BANKS AND CREDIT SOCIETIES

There are special banks and societies in Italy through which it is possible for farmers to secure credit on long term for development purposes with amortization payments, or for short periods for general business. The government has provided funds for the assistance of these institutions and permits banks to handle such loans. A limited amount of government funds is available at the rate of three and one-half per cent. In 1912 there were about 2,000 local cooperative banks chiefly in the interest of farmers.

The so-called rural banks, which are similar to the credit societies inaugurated by Raiffeisen in Germany, were started about thirty years ago. Many of these banks are managed in conjunction with the Catholic church and certain religious requirements must be complied with before one may become a member. The territory served by the local bank is limited and the responsibility of the members is unlimited. Deposits are received from both members and non-members and the interest paid on them is four per cent., or slightly less. These funds are loaned at a slight advance and when not sufficient for the demand they are supplemented by funds which the local bank borrows. These societies are favored by exemption from taxation.

## X NORWAY

It is said that only three or four per cent. of this country can be cultivated, but the land that is in use produces large crops. Farmers have their organizations and some of these are actively engaged in promoting large enterprises. Within a short time most of the leading agricultural societies of the country will have their headquarters located in a large new building in Christiania.

### THE ROYAL SOCIETY FOR THE WELFARE OF NORWAY

This society was founded in 1811. At first it was devoted to general subjects and gave much assistance in founding the Norwegian University, which is not an agricultural institution. In the last fifty years the society has become entirely agricultural. It is particularly interested in the Norwegian Agricultural College which was founded in 1859. It has taken the initiative in numerous agricultural matters that later were taken up by the government. The society receives a small appropriation from the government annually. Its principal office is in Christiania.

### ROYAL AGRICULTURAL SOCIETY

This society has much to do with the conduct of agricultural, educational and developmental efforts of the country. It is a national society made up of numerous organizations, each of which covers two or three counties (one amt). These district societies in turn are made up of smaller societies, of which there are frequently thirty to forty in a district. A society visited is one of the stronger amt organizations and derives one-half of its fund used for agricultural purposes from the national government and one-half from taxes in its geographic district. There are twenty such (amt) societies and they receive about \$80,000 from the government and the same amount from local taxes. These funds are expended in the interest of breeding stations; sending out fruit trees, especially to small farmers; giving instruction to teachers and sending seeds to schools; maintaining traveling teachers to give instruction concerning poultry, rabbits and bees



## NORWAY



FIG. 240. FARM IN NORWAY.



FIG. 241. OFFICES OF THE NORWEGIAN AGRICULTURAL BUYING SOCIETY, CHRISTIANIA.

for small farmers; conducting experiments; examining seeds for purity; studying soils; demonstrating superior agricultural methods; maintaining traveling agricultural and horticultural experts; conducting township shows; holding short courses in domestic science; purchasing and maintaining high class stallions and giving special attention to farm bookkeeping.

A township show, especially for live stock, is held every third year in every township. Prize-winning bulls and cows receive special cards, and the owner of a bull is given the cow's card when she has been bred to the bull and payment has been made for the service. The prizes the owner receives on his bull at the township show depend upon the number of cards he holds. For each card he receives a little more than \$1.00 if his bull gets first premium, about seventy-five cents if second, and fifty cents if third premium.

Under direction of the same organization there are societies which keep high-class bulls for which the state allows one-half their cost and assists in paying for their keep.

#### NORWEGIAN FARMERS' UNION

This union has about 16,000 regular members and 40,000 members in 600 smaller allied associations. Its chief purpose is to secure better schools, better seeds, to help farmers sell their products, and to exert influence upon the government in the interest of changing the tariff. The union has six branches, which give special attention to the following subjects: finance, general work of the union, schools, agricultural credit and economics, development of the back country, and tariff.

Plans are being made to begin selling meat, hay, seeds, dairy products and garden products for members, such sales not now being made by any society.

The branch giving attention to finances determines what fees members should pay. At present each pays about thirteen cents and two per cent. of his government tax. Thus the membership fees are graduated to fit the ability of the member to pay and to correspond with the benefits he may derive. Every farm is valued by the government and any member may readily compute the amount his neighbor should pay. This branch passes on every

proposition coming before the union and which would involve expense. Their budget now amounts to about \$5,000 a year, all of which is received from members. The society receives no income from the government.

The branch attending to the general work of the union is managed by a board of twenty directors. These are elected so as to be fairly representative of the membership. Five members constitute the executive committee and this committee passes on all measures of importance coming before the union. The committee members receive railroad fare but no salary.

The schools branch is endeavoring to get more agricultural instruction into the schools. It says it wants the children to be taught with some reference to their life work. It is trying to get books on natural history into the schools and is making efforts to develop short courses for subjects of lesser importance, such as poultry.

The agricultural credit and economics branch organizes farmers so they may secure loans from banks. It now pays for short loans from five to five and one-third per cent. These loans are for short periods and are to assist farmers when help is needed temporarily. The Norwegian government operates mortgage banks where money is loaned at about three and one-half per cent. plus one and one-half per cent. payment on the principal, under which arrangement loans are repaid in about forty years, the farm serving as guarantee. The government also assists working men to procure small farms and build houses, charging the same interest, the township agreeing to guarantee the government against loss.

The branch of the union interested in the development of the back country is endeavoring to secure certain rights to the townships in reference to taking game and fish in areas the ownership of which is claimed by the government. This branch is working also for better systems of communication.

The tariff branch is seeking to advance tariff rates on agricultural products, with the claim that such products now receive only about one-third the protection given to other industries.

## FARMERS' SUPPLY SOCIETY

This is a cooperative organization made up of eight district (amt) societies which elect representatives to the chief society to direct its affairs. There are two other smaller societies of the same kind in other parts of the country. The three are not officially connected, but they have joint conferences. It is said that most farmers belong to one of these societies. The chief of these three organizations in 1911 was made up of 481 societies; in 1912, of 552. In one year it purchased products valued at about \$1,500,000. About twelve years ago its purchases were only ten to fifteen per cent. as large.

It is claimed the organization has grown so rapidly for the simple reason that it sells products cheaper than merchants sell them. It has no expenses for advertising and no agents to maintain. It buys in large quantities, sells for cash, or credit for one month; and its members know they get reliable goods, because everything is guaranteed. If a member makes a purchase and the quality is not right, his money is returned, even though the society is not responsible for the defect. All members of this society must purchase from the society as long as they retain their membership. The regulations provide that if a member buys outside the society he cannot buy any more from the society. But this regulation is not resorted to because the members appreciate the advantages of the organization, and if small violations occur they are usually ignored.

Members of the small affiliated organizations are solidarily responsible, meaning unlimited responsibility, or, as often stated, "One for all and all for one." Farmers desiring membership must apply and be elected. It is easy for one to get membership if he is regarded as reliable. A district society must have at least twenty members. Some of them have from 200 to 300. The larger of these have special storehouses.

The society is now buying seeds from its members to sell to other members, and some farmers grow seed especially for this purpose.

A large cooperative bacon factory in Christiania was started by this society. It is now an independent organization and handles cattle and sheep as well as swine. All members are required to deliver their animals to this factory.

### COOPERATIVE DAIRIES

Cooperative dairies are conducted with success. Statistics collected about eight years ago showed that there were 663 cooperative dairies and 81 private in Norway. Three hundred and ninety-nine dairies made butter, 175 made butter and cheese, 224 sold milk and 55 made cheese.

### OTHER AGRICULTURAL ORGANIZATIONS

In addition to the above, there are forestry and marsh societies, and a society for agricultural young people, and numerous special organizations of farmers.

## XI RUSSIA

In April, 1912, there were 3,103 agricultural societies in Russia, 2,633 of these being general societies covering large areas and with local sections. Nearly 500 were special societies. It is needless to say that agricultural societies have their important part in the lives and work of Russian farmers. They have had their prosperous periods and they have been held in check and even abolished. Apparently they are thriving now. They are favored by the government and receive from it large sums of money. It is said there has been a very great, spontaneous growth of peasant farmers' cooperative societies since the operation of the land act under which peasant farmers are rapidly coming into the ownership of the land they occupy. In large measure these societies are modeled after those in Germany and Denmark, from which countries Russian peasants have returned with knowledge of methods of organization and appreciation of advantages to be gained.

Farmers' societies in Russia are organized for many different purposes, having perhaps as wide a scope as in any other country. Small societies are associated in larger societies for the purpose of securing concessions from the government in connection with laws regulating land holdings; to get help from one another, but more particularly from outside sources; and to learn improved methods of farming. In these purposes the societies are aided in a financial way by the national government and district governments. Some societies are composed of land owners and employ experts in various branches of agriculture for the benefit of the membership and to assist smaller farmers as well. Many of the societies are organized for commercial purposes, including the handling of credit; many others have special purposes, such as to advance the interests of dairying or gardening.

### THE NORTHERN AGRICULTURAL SOCIETY

About fifteen years ago this society was organized, with headquarters in St. Petersburg. It is the largest agricultural society in northern Russia. It occupies commodious offices in a central

location, and has a staff of about ten clerks permanently employed. The scope of the society is described as follows: First, the instruction of farmers by lectures and demonstrations; second, the free distribution of commercial fertilizers for the purpose of assisting in extending knowledge of their use; third, the giving of assistance to members in selling their products (the society sometimes buys outright and even helps to regulate prices); fourth, the purchasing of supplies for members. The value of supplies handled for smaller affiliated societies is about \$250,000 a year. In addition to this, many of the smaller societies buy on their own account and at prices arranged by the society.

The government assists the organization by furnishing experts to give instruction under its direction and by giving cash for this kind of work,—in 1912 about \$25,000. There are now about forty of these experts doing work in the agricultural branches, such as dairying, gardening, and general agriculture. They are known as “wandering” instructors, and are kept in the field practically all the time.

The government does not appropriate anything to aid in buying and selling goods, but in this work assistance is secured through loans from the state bank.

The society has about 600 members who are not peasants, and about 100 small associations, each one having from fifty to 900 peasant farmers in its membership. Considerable income is received from members' fees.

An important function of the society is in advising the government upon agricultural subjects of interest, and this advice is given in response to requests from the government. Care is said to be exercised to avoid expressing opinions upon political questions, but tariff and industrial questions are not excluded.

The society has a committee of management composed of ten men, of whom one is selected as president. This committee is named by members of the society who are large owners of land, the small farmer members of affiliated sections having no voice in the selection of the members. The committee meets seldom in summer, but from September to spring usually once a month. Most of its members live in St. Petersburg during this period.

## RUSSIA



**FIG. 242. HEADQUARTERS OF THE RUSSIAN NATIONAL DEPARTMENT OF AGRICULTURE, ST. PETERSBURG**



**FIG. 243. COOPERATIVE AGRICULTURAL SOCIETY, DIRECTORS' ROOM, ST. PETERSBURG**





## THE RUSSIAN GRAIN SOCIETY

Peasants are sent by this society to other countries where they work on farms a year and then return to Russia to put in practice the knowledge they have gained while abroad. From 100 to 150 men are kept in Austria, Denmark, Germany, and sometimes other countries. Representatives of the society find places in foreign countries for the Russian peasants; they endeavor to select locations where the laborers will learn better farming methods as well as receive fair pay for their work. The society requires that men sent out shall be well recommended. They spend about \$75 on each man sent away for a year and have four times as many applications as can be granted. This society has a large surplus fund. Last year it received \$3,000 from the government and about \$17,000 from private sources.

## CREDIT ASSOCIATIONS

These associations, which are of recent origin and of rapid growth, are separate from the agricultural societies and are organized on a plan similar to that followed in Germany. A group of farmers wanting small credit can organize a society and conduct it under regulations of the Minister of Finance. Under certain conditions the national bank advances to a society ten times the amount of its capital. Thus if the society has \$1,000 capital it may borrow \$10,000. Government officials make frequent inspections of the affairs of each society. The society pays the government four per cent. on the amount borrowed and receives from its members six per cent. on the loans it makes to them. Loans may be kept for nine months or as long as a year; they are not made for purposes of land purchase. Members of the society are generally responsible for their own shares only. The small credit associations frequently accumulate considerable profit and this is expended in the interest of local agricultural improvements.

In 1910 there were in Russia 1,786 Raiffeisen mutual credit societies with nearly one million members and a capital of nearly \$60,000,000. In the same year there were 3,606 Schulze-Delitzsch societies with about 1,500,000 members and a capital of over \$25,000,000. The headquarters of these credit societies are in Moscow; they are represented by special committees in St. Petersburg.

## AGRICULTURAL SELLING SOCIETIES

Efforts have been made to sell agricultural products through cooperative societies, but many difficulties have been encountered. The best success has been had with seeds.

## OTHER SOCIETIES

In Moscow there is a society similar to the Northern Agricultural Society, larger and older, having over 1,000 members. Among other activities, this society manages an agricultural school.

It is said that agricultural cooperative societies are best organized and strongest in the districts near the Baltic where there is a large German population. These societies are similar to those in Germany.

The Imperial Society of Pomology and the Imperial Economic Society are said to be influential in their respective fields. The latter society includes agriculture with other questions.

## POLAND IN RUSSIA

Since 1846 the organization of peasant farmers has been agitated and many articles and books have been written on this question in Poland. Well informed persons, including landlords, believed that organization would be helpful to the peasants. In 1859 the landlords organized a society for themselves but largely for the purpose of helping peasants. In 1862, when organization had made considerable headway, societies were dissolved by government order. Then for about thirty years organization was prevented, when the movement was again started. It was supported by the government, met favor from the farmers, and to-day it is said that the prosperity of the peasant farmers is very largely due to their agricultural societies.

The practical benefits of an organization were seen on a dairy farm near Warsaw. Once each two weeks an expert employed by the farmers' control association visits this dairy farm and gives instruction as to amount and kind of feed the cows should have and the care or treatment of any animal needing special attention. Presumably he does his work thoroughly, for it is said he cannot look after more than about fifty cows in one day. The owner of

## RUSSIA

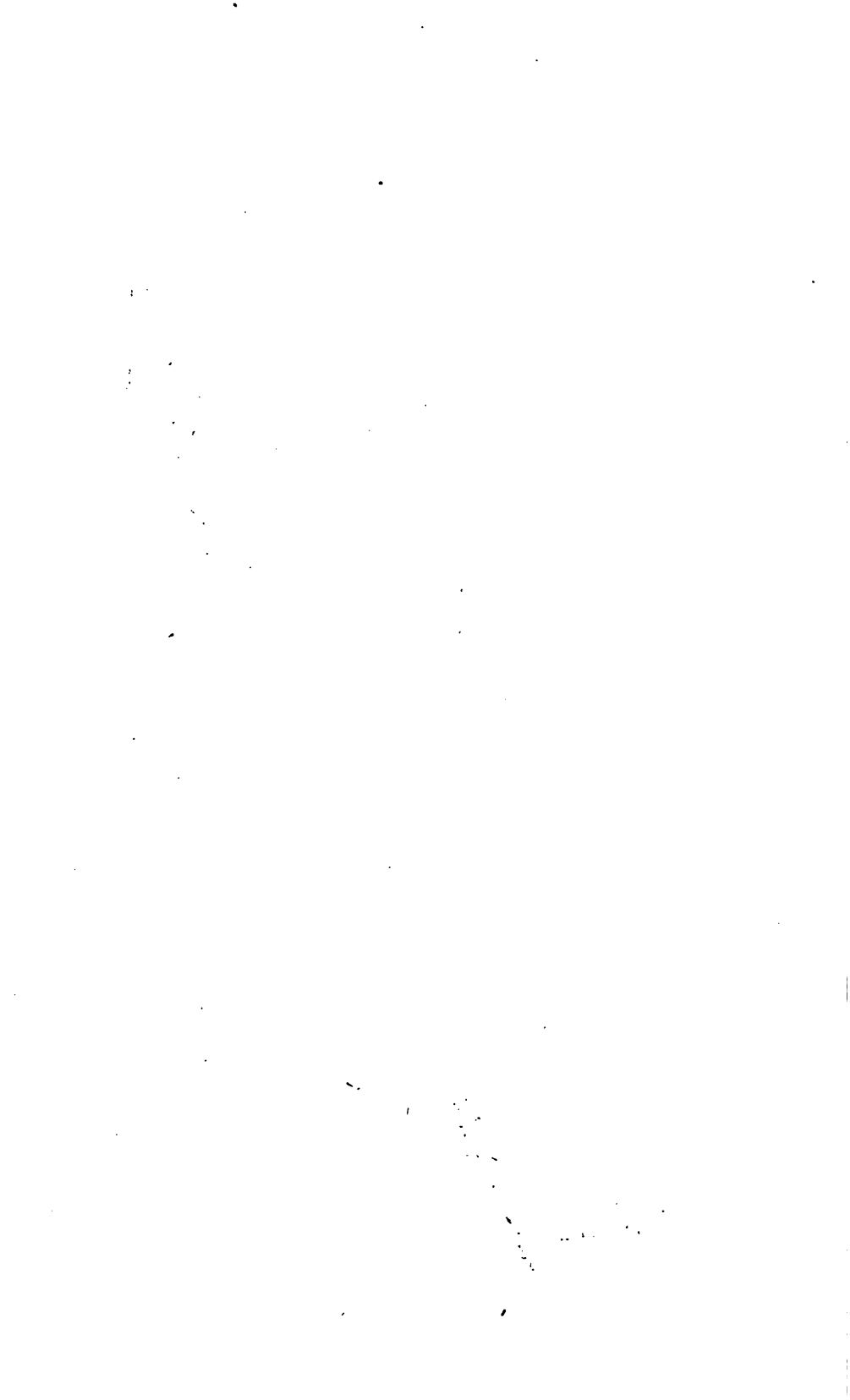


FIG. 244. DAIRY HERD SUPERVISED BY A CONTROL SOCIETY, NEAR  
WARSAW



FIG. 245. STABLE OF A HERD SUPERVISED BY A CONTROL SOCIETY, NEAR  
WARSAW





this dairy farm is associated with twenty-three other owners and they employ one expert with three assistants. These employees keep all the records and spend all their time on work done for the twenty-four farmers. The chief expert gives lectures and arranges field experiments and demonstrations. Official instructors meet with the managing committee of the society and discuss work to be done and the results to be attained. They assist in arranging local shows and competitions which are popular with the people. One such show is held in each community about every three years. A number of such associations as this one are affiliated, forming a district society, the affairs of which are managed by a committee of ten members who faithfully attend their committee meetings. Some of these members come a distance of twenty miles, and at their own expense.

#### THE CENTRAL AGRICULTURAL SOCIETY OF POLAND

Six years ago this society was organized. Its headquarters are in Warsaw, and plans are being made for the erection of a new building. The society appears to be doing work of great value and this in spite of many difficulties. The central society is organized by forty district societies which operate in all parts of Poland, some of them covering an entire province, of which there are ten in Poland. The central society also accepts memberships of individuals who are members of either a district or a local society. The forty district societies are made up of 700 local societies and some individual farmers and land owners. Some of the local societies have several hundred members. The total membership is about 32,000. Each member of a local society pays from twenty-five cents to fifty cents annually; individual members of the central society pay \$7.50 annually.

Last year the central society budget amounted to nearly \$125,000, not including the cost of expert instructors and maintenance of agricultural experimental work. Of the amount named the government contributed about \$106,000, which is said to constitute the most effective effort of the government in the interest of peasant farmers.

The local societies are interested in educational rather than commercial questions. A general committee elected by delegates

of district societies has charge of the affairs of the central organization. In this central organization sections have been established to give special attention to different phases of agriculture other than buying and selling, and including especially educational efforts in the interest of better live stock, general crops, dairying, economic and social questions, scientific and experimental agriculture and the development of local societies. Special stress is given to the strengthening of the units which occupy small territories, thus working in an opposite direction from the centralization of all authority. Each section selects a managing committee and these committees prepare plans and carry on work, but subject to the approval of the general committee of the organization.

The character of work done by some sections of the society is indicated by the following:

The economic and social section presents to the government arguments in connection with the tariff and agricultural legislation. The society was represented at St. Petersburg when the question of raising tariff rates on American machinery was being considered. Statistics and information regarding crops are collected. Business accounts are kept for numerous farms.

The dairy section organizes cooperative creameries. It employs six dairy instructors. Experts examine the account books of cooperative plants. Special attention is given to the encouragement of cooperation among small owners. This section has assisted about eighty cooperative plants, having 25,000 members and making butter worth \$200,000 a year. It arranges for lectures and assists in organizing competitions. Some lecture courses are conducted for a week and others may continue as long as six months. It is expected that the city of Warsaw soon will require dairy and milk inspection and turn the supervision over to this section. This may furnish a valuable suggestion for certain American cities, namely, that a reliable farmers' organization, recognizing the importance of superior methods as in the interest of its own members, be given the right to require the minority to maintain decent standards. Particularly aggravating cases would need to be handled by the regularly constituted authorities.

The section on scientific and experimental agriculture operates four experimental stations and numerous additional plats. Ex-

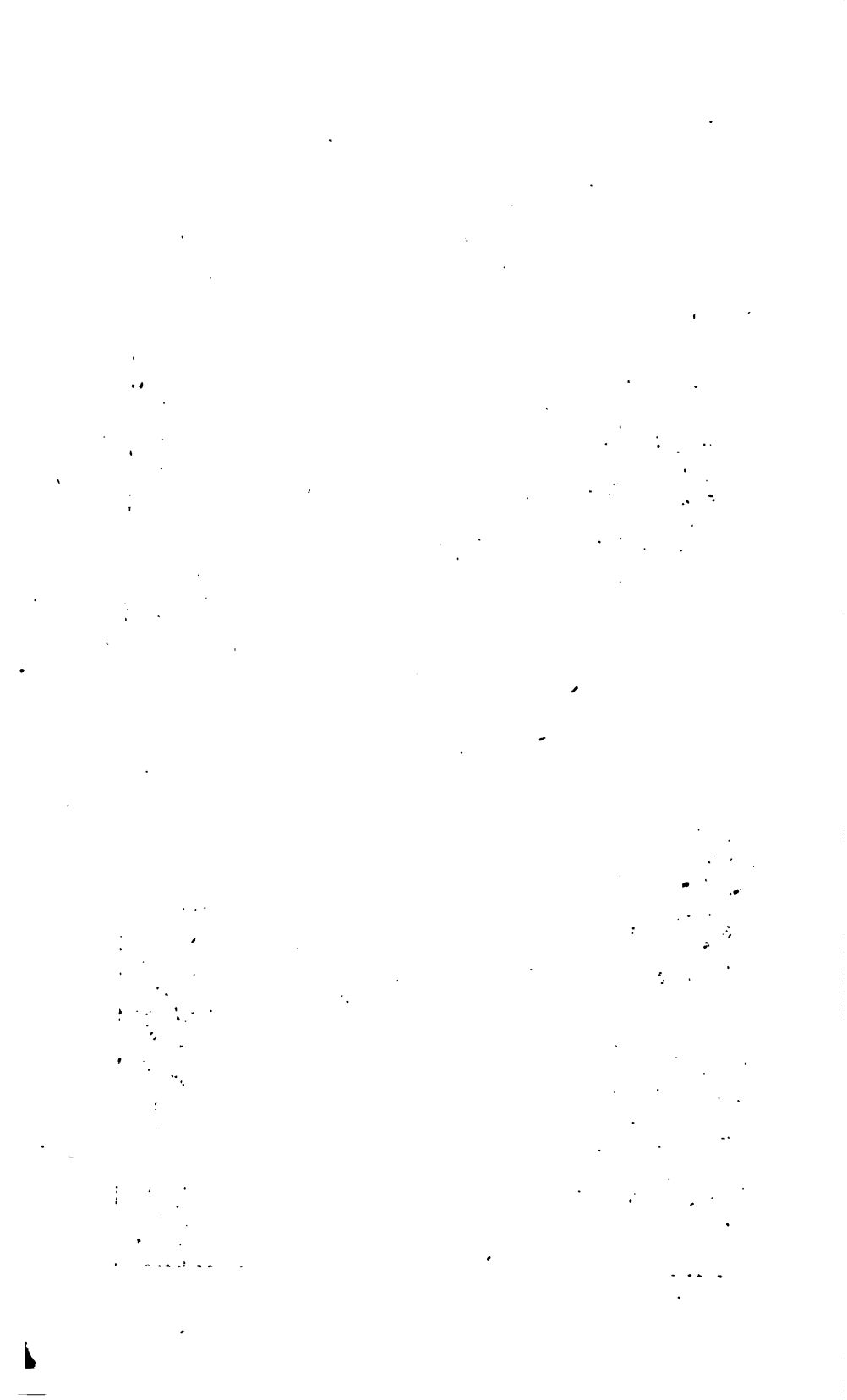
**RUSSIA**



**FIG. 246. AGRICULTURAL COOPERATIVE SOCIETY HEADQUARTERS, WARSAW**



**FIG. 247. A COMMERCIAL DAIRY PLANT, WARSAW**



periments are conducted on soils, seed testing, in zootechnics, and in connection with meteorology.

The section on local societies furnishes the chief agricultural knowledge available to peasant farmers. Schools for these farmers cannot be organized, on account of the Russian requirements regarding the Russian language, which the Polish people do not understand, but under government regulation the society organizes lecture courses in the Polish language; these may continue not more than eleven months. Instruction is given in the use of commercial fertilizers, better methods of cultivation, breeding, and value of better seeds. Thirty-four instructors are employed. One thousand three hundred and forty-three experiments and demonstrations are in progress on peasants' farms. Special attention is given to the proper care and use of manure and the use of green leguminous crops as manure. Special instruction is given about fire-proof buildings. Two instructors and one workman give their time for this purpose and they tell and show the peasants how buildings should be made for better protection against fire. Instruction is given in the manufacture of tile to replace thatch roofs. Fire brigades are organized and instructed.

Superior bulls and boars are purchased and loaned to the societies. Last year this section expended in livestock improvement \$42,000, of which the national government gave one-half. The society now controls 280 bulls and a few boars. Agricultural machines are placed in different communities, often leading to the purchase of similar machines by societies or individuals.

The central society issues a publication and receives payment from those who subscribe for it. Occasionally a free bulletin is sent to all members.

#### COOPERATIVE AND COMMERCIAL SOCIETIES

As early as 1850 there were organizations of land owners founded for the purpose of buying and selling agricultural articles. Peasants were not members. Since the reorganization of these societies in 1890, after a long period of inactivity owing to government interference, they have grown rapidly. The largest of them are known as syndicates. The largest society has headquarters in Warsaw and does a business of \$1,000,000 a year.

There are about twenty of these societies with their several branches. Each member pays \$50, becomes a shareholder and is not responsible beyond this investment. This payment greatly restricts peasant membership. Their greatest activity has been in connection with purchase of articles for members, and in this they have been handicapped for want of capital.

Branches of these societies, or independent organizations, are engaged in the sale of butter made in cooperative and private dairies, and eggs and other products. One such society sells milk in Warsaw. Another is a union of producers of alcohol from potatoes, it handles the surplus of its members over what is taken by the government. There is also a union of starch producers, and another to sell grain. And there is one society to assist in cooperative land drainage.

#### INSURANCE ASSOCIATIONS

Two cooperative insurance associations, including many peasant farmers in their membership, have headquarters in Warsaw. One of these is to secure against losses from hail and the other to protect against losses from fire. The latter relates only to crops, stock and machinery and not to buildings, because buildings are required to be insured against fire in a government agency, which is said to yield a profit. These commercial organizations do not receive government help.

#### CREDIT ASSOCIATIONS

The Land Credit Association is a large and strong organization started about 1825. It has a substantial and handsome building in the center of Warsaw and is said to be one of the oldest land credit associations in the world. It gives loans on long terms, with a provision for repayment of one to two per cent. of the principal each year. The land owner may borrow as much as one-half the value of his real estate, which is appraised at full value. The minimum loan is \$250. The borrower receives bonds which he sells as he chooses. The bonds pay from four to four and one-half per cent. interest; loans may be repaid by bonds. The association is conducted at a profit and has turned in to the

government some millions of dollars. It loans only on agricultural land.

There are about 600 small credit associations in Poland, many of them of the Raiffeisen type, but the majority are of the Schultze-Delitzsch type, usually with limited liability. These latter associations are located in towns and their benefits are not important to farmers. Apparently to keep them from operating in the country, the government does not give them the same authority for making collections in the country as they enjoy in the towns, where summary action may be taken in case of failure to make payment when due. The government extends certain banking facilities to the country districts. These banks, however, do not suit the peasants, because they are more restricted than the associations in giving loans, and those in charge of them are more or less dominated by official practice, and, chiefly, they are not capable of understanding the situation or the needs of the farmers.

## XII SCOTLAND

Increasing efforts are being made in Scotland to advance the interests of agriculture. There are three schools or colleges of agriculture located in three cities. The government contributes one-half of the expenses of the Agricultural Organization Society. Special efforts are being made to organize farmers located on small areas. The Small Holdings Act, similar in essentials to acts in Ireland and England, is resulting in breaking up large unoccupied areas into small farms and placing farmers on them. This work is strongly supported by cooperative associations.

### SCOTTISH AGRICULTURAL ORGANIZATION SOCIETY

This society does not engage in trading for profit. Its purpose is to promote agricultural cooperation in Scotland, especially in the purchase of supplies and sale of commercial products. It conducts its work through organizers who are sent into the field to give information as to organization of local cooperative societies; it also provides model rules for the societies it organizes and later it sends lecturers to these affiliated societies to assist them in handling business questions. It also publishes occasional leaflets and other literature dealing with the subject of agricultural cooperation. The members of local societies are assisted in securing better markets; they are brought in closer contact with manufacturers from whom they must secure supplies, and with the dealer to whom their products are sold. The local societies assist materially in making more uniform the quality of farm products and in assuring the purity of feeding stuffs, seeds and fertilizers. The Organization Society also gives considerable attention to improving railroad facilities and holding down railroad rates.

Each individual member or affiliated society must hold a share having a value of about \$5. Land owners pay an annual fee of \$5 additional, and others at least \$1.25 additional.

The Organization Society serves a useful purpose in placing at the disposal of affiliated societies suitable plans and specifica-

tions for buildings and equipment for various forms of cooperative dairying, and assists in obtaining competitive bids for constructing and installing suitable equipment. When an application is received for assistance in the creation of a cooperative society, for example a dairy society, the larger organization without charge proceeds to do all necessary propaganda work. A special feature is made of organizing cooperative milk depots. Here there is built a suitable refrigerator with modern appliances to which milk may be brought from farms in the vicinity for preparation for shipment. It is pointed out that through the cooperative depots milk producers get better prices for their milk, reduce the risk of non-payment, and make use of surplus milk to greater advantage. Leaflets issued by the Organization Society set forth briefly and clearly the advantages of cooperation; for example, one on forming egg and poultry societies discusses the subject under fifteen headings and gives all necessary preliminary information concerning present conditions; the holding of preliminary meetings to arouse interest; the appointment of preliminary committees; the advantages of registering the society under the National Friendly Societies act; capital which should be raised, its amount and how to secure it; rules of procedure; the securing of new members and larger business; officers of the organization and their duties. These circulars are widely distributed.

There are about 100 agricultural societies affiliated with the Organization Society. Sixty of these which represent different interests average sixty members doing an annual business of something near \$15,000. This business is chiefly from the sale of milk and eggs and in buying supplies. The secretaries of these small societies are generally not paid, but sometimes receive small compensation. Secretaries of the stronger societies have regular wages.

#### THE FARMERS' SUPPLY ASSOCIATION OF SCOTLAND

This association is an incorporated organization through which many local societies secure their requisites of feeding stuffs, fertilizers, seeds and machinery. It was founded in 1884 and has

a membership of nearly 1,500. Its annual purchases amount to about \$250,000. Its business is conducted on a small margin and its balance sheet shows assets amounting to about \$12,000 invested in standard railroad securities.

### HIGHLAND AND AGRICULTURAL SOCIETY

In earlier days this society devoted itself to making improvements in the highlands of Scotland. It repaired roads and bridges without the aid of the government. Now its chief work is in the holding of an agricultural show and in helping to protect farmers' interests before Parliament. There are 6,000 members, many of whom pay different rates. A chemist and botanist are employed and their services are available to the members at reduced rates. This society gives from \$3,500 to \$4,000 per year to other societies as grants and to help them hold shows. Thus it upholds the efforts of the smaller societies which conduct shows in districts not visited by the main society. The Highland show is a big event. It is held in different places in different years. The local show in the district visited suspends the year the larger show is in progress. About 500 medals are awarded annually for plowing matches. These contests have been going on for about 100 years and are now conducted by the local societies.

The Highland Society started in Scotland the plan of keeping careful milk records in dairies and this has now become popular in the Ayrshire Society. Experts visit farmers and assist them in starting and keeping accounts.

### CHAMBER OF AGRICULTURE AND ASSOCIATED SOCIETIES

The object of this organization is partly to watch over the interests of agriculture in all branches and to promote these interests by such means as appear expedient. Members must be proposed and duly elected. Expenses are met by subscriptions from members and associated societies and a considerable fund is received from honorary members. Each member is called upon to pay at least \$1.25 on admission and about \$5 on the first day of January following. The business of this Chamber is managed by a board of directors consisting of the president, two vice-

presidents and at least twenty members, a majority of whom shall be tenant farmers. The Chamber of Agriculture has about 800 life and ordinary members, and about seventy affiliated societies representing about 16,000 persons. It employs a permanent secretary, who is a lawyer and a specialist in agricultural law.

### XIII SPAIN

#### THE ASSOCIATION OF LIVESTOCK OWNERS

This society has headquarters in its own substantial building in Madrid. It was organized about sixty years ago and early performed a useful service in securing highways for cattle so that they might be moved from one province to another. This work is still continued owing to high freight rates on railroads and the lack of good highways, but it is not done as actively as formerly. The society was reorganized about twelve years ago, since which time it has given attention to various subjects for the welfare of farmers, especially the suppression of animal diseases, which is now considered its chief work.

A force of not less than twelve clerks is engaged in the main office and the secretary of the society is a marquis. Membership is made up only of farmers who own livestock. One who owns olive groves may not join unless he owns livestock also. There are about 1,500 regular members and about as many more small farmers who hold membership in affiliated organizations. The membership fee for regular members is about \$1 a year for each 1,000 sheep owned. One bull, steer or cow is considered the equivalent of six sheep; one horse as the equivalent of eight sheep, and one hog of two sheep. It is said the society receives no government help.

The society serves its members in both educational and business ways. It has a few experts, including two veterinarians, two experts in cheese making, and one in seed improvement. These men are located in Madrid and go out to assist members at the expense of the society. At the present time the veterinarians are studying a new swine disease. They distribute considerable quantities of serums and vaccines at a large discount from ordinary prices. It is said that last year the society sent out to its members these preventive remedies having a total value of about \$10,000.

The cheese experts teach improved methods of cheese making, especially how to make butter from the fat contained — and com-

monly lost—in whey. Many replies to inquiries received are sent by the experts to the members by mail.

The society purchases machinery for its members and arranges for experts to instruct farmers in the use of the machinery. So little is known of farm machinery that a member wanting this equipment leaves the matter largely with the experts in the society. At present these purchases are made from dealers in Spain, but as the business is increasing it is planned to buy direct from manufacturers in the United States, Germany and elsewhere. Purchases of seeds and cattle feeds are also made for members.

Apparently very helpful assistance is given to members in the sale of some of their principal products. Recently such sales of wool have been made. This was started because of the prevailing ignorance of farmers as to the value of wool and the fact that buyers took advantage of this ignorance and the farmers' need of money, and paid unfair prices. By combining the sales the society handles enough wool to give the matter proper business-like attention. It is selling in Germany and arrangement is made to advance to the owner about seventy-five per cent. of the value of the shipment at the time it is forwarded; full value for the shipment is guaranteed. In handling this business the society uses its own capital, supplemented by loans from the banks for which it pays about five per cent. At the time of the writer's visit one member of the society had just received \$6,000 for his wool sold by the society. It is said that the total sales for 1912 showed a large increase over 1911, but were only about \$30,000. This branch of the work may be expected to grow to large proportions.

Meat producing animals are also sold by the society for its members. They go chiefly to markets in Madrid and Barcelona. This also is a new development. The society takes charge of the cattle when they arrive at the railroad stations in the cities, controls their slaughter and sale and guarantees payment.

Agricultural exhibitions are conducted by the society at different places. A principal show is held each fourth year in Madrid and in other years local shows are held in the capitals of the forty-nine provinces. On account of these shows the rail-

roads grant special reduced fares for exhibits and the government waives tariff collections on machinery from foreign countries. Admission tickets are generally about twenty cents.

Recently the society has begun the publication of a bulletin which contains prices of meat and wool. This is distributed free to members. It contains also agricultural information of interest and value.

A claim department looks after damages in connection with transportation of cattle, and in the year 1911 attended to 1,100 such claims involving about \$6,000.

#### THE SPANISH AGRICULTURAL ASSOCIATION

This organization was started about five years ago. It has headquarters in Madrid and its principal object is to protect the interests of the agricultural class against abuses by authorities in small towns and villages, and to help its members by teaching them new and better methods of agricultural practice. The present secretary of this society is a viscount. It is governed by a board of nine directors, who happened to be in session at the time of the writer's visit. They were holding their meeting in a room comfortably but not elaborately furnished, and the walls were covered with charts and photographs showing agricultural statistics, and pictures and specimens of agricultural products, especially in silk production. A general meeting of members of the society is held once a year and the place of meeting is changed from year to year. There are about 700 individual members and affiliated societies, and counting the individual membership of the latter, the total represents over 30,000 farmers. The membership fees during the last year were slightly over \$1,000.

The society boasts that it does not receive government help except for a small appropriation of about \$400 for some special service. The association furnishes its members seeds, plants, cattle, machinery, and all other materials which it secures at the lowest prices. It does not engage in the sale of farm products, but assists members in finding reliable dealers. It does not make loans. A monthly bulletin is published for the purpose of giving instruction in better agricultural methods.



**SWEDEN**



**FIG. 248. ROYAL AGRICULTURAL SOCIETY BUILDING, MALMO**



**FIG. 249. ASSEMBLY ROOM, ROYAL AGRICULTURAL SOCIETY, MALMO**



## XIV SWEDEN

### THE ROYAL AGRICULTURAL SOCIETY

This society has a subsidiary organization in each of the twenty-six counties of Sweden. The one in the county of Malmo was visited. This county branch owns its building, which is a large, fine appearing, brick structure, and a public cattle market with stables and yards that are permanently built and exceedingly well kept. The main building and cattle yards are said to be worth over \$100,000, about half of which is on mortgage. It is said that most of the farmers in Sweden belong to this society. Each member pays about twenty-six cents (one krone) a year to the society and receives its publication. In Malmo county there is distributed an edition of 10,000 copies.

The county organization is made up of parish organizations and membership fees remain in these latter. The county associations receive one-tenth of the government alcohol monopoly profits. This organization receives, in addition, unusual recognition by the government. Every year two delegates from each county society are invited to meet in Stockholm and the government asks the opinions of these agricultural representatives regarding legislative matters. Such a meeting might well be called an agricultural congress.

Each of the twenty-six county societies has its expert (consultant) who receives a salary of from \$500 to \$1,000. In some counties there is one expert on dairying and animal husbandry, and one on farm crops. In the county of Malmo there are six experts,—one on dairying, two on farm management and field crops, one on cattle breeding, one on gardening, and one woman who gives her attention especially to women's subjects. Their advice is free to small farmers, but a charge of from \$1 to \$1.25 a day and expenses is made against the larger farmers. Some of these experts spend their winters teaching winter courses, but others are engaged in the field throughout the entire year.

Valuable work is being done by the Royal Agricultural Society through cow test associations. There are 165 of these in Malmo

county, having 50,000 cows. Farmers pay from twenty-five to fifty cents a cow each year and the government, through the society, bears the balance of the expense, which amounts to twenty-five cents or less a cow. Such figures as these are given to show the value of this work, not only to the farmer but to the whole country.

AVERAGE YIELD OF ONE COW

	1908.	1909	1910.
Milk .....	58.06	67.68	86.66
Fat per cent.....	4.21	4.13	4.30
Total fat .....	244	279.07	372

The units of weight and time are given but have no significance, the purpose being to show increases. The cow test association agents are paid about \$125 to \$150 a year, meals and lodging.

The society is slowly but steadily establishing a Swedish breed of cows, with a registry system. To get into the registry a cow must produce a given amount of butter fat as an average of all years, she must comply with requirements concerning breed type, and she must have advanced through a prescribed system of breeding continuing not less than five generations.

Another important branch of work being conducted by the society is a campaign against bovine tuberculosis. The German or Ostertag system is being followed, which provides for the elimination of tuberculous animals when they are deemed to be spreaders of the disease. Farmers pay about thirty-five cents a cow for the service of representatives of the Royal Agricultural Society who makes examinations and gives directions. The society now has about 8,000 cows under observation. Three veterinarians are employed and this work costs the society about \$1,000 a year besides what the farmers pay. The government also is conducting work against tuberculosis. It follows the Danish or Bang system, the government work being done chiefly on large farms where isolation of reactors may be most easily provided.

#### THE NATIONAL UNION OF AGRICULTURAL COOPERATIVE SOCIETIES

Cooperative buying in Sweden is an old idea. It began in a natural way, one farmer buying for himself and his neighbors.

**SWEDEN**



**FIG. 250. BOARD ROOM, ROYAL AGRICULTURAL SOCIETY, MALMO**



**FIG. 251. CATTLE SALES DEPARTMENT, ROYAL AGRICULTURAL SOCIETY, MALMO**

**SWEDEN**



**FIG. 252. ROYAL AGRICULTURAL SOCIETY CATTLE SHEDS, MALMO**



**FIG. 253. BUTTER EXPORT SOCIETY, BUTTER STRIPPED AND READY TO BE JUDGED, MALMO**

In 1895 some combinations were effected. At first only large farmers participated and later small ones joined in these efforts. It is said that about one-eighth of the farmers now belong to buying societies. A national organization was established about 1905. This has its headquarters in Göteborg. This organization has affiliated associations in different provinces. There are now twenty of them buying and selling for their members. The most important articles purchased are cattle, feeds, fertilizers and seeds. Machines are not handled, because the society has met opposition from machine manufacturers, and rather than enter into a contest they are strengthening themselves in the work already started. Later, machines may be added. The provincial society for the province of Skåne has headquarters in Malmö. The provincial societies are independent and can buy and sell for themselves, but most of this business passes through the national headquarters. At that place the organization operates a large seed-cleaning plant.

#### BUTTER AND EGG EXPORTING SOCIETIES

A society gives attention to butter exportation. It is said to be the largest of its kind in the world, controlling about one-fourth of all the Swedish butter exported,—an average of about 2,400 casks weekly. Very close attention is given to the quality of butter exported. The creameries are paid according to quality, a committee of five experts examining the butter. Two of these experts are appointed by the association, two by the creameries; one is the dairy consulent. They receive at their examining rooms two casks from each shipment of a creamery representing the first and last day's make contained in the shipment. More casks are required if the quality is not running good. The committee considers color, salt and quality and reports its opinion on a basis of fifteen points for perfect. A bonus of a fraction of a cent a pound is given for quality above the established standard and a reduction is made for poor quality. An American visitor familiar with dairy methods at home could not help but be impressed by the care and seriousness with which the Swedish butter expert committee performs its work. Each package of butter is examined deliberately and minutely. There can be no

question as to the advantage that would come to American creameries and cheese factories, as well as those who purchase the products of these factories, if a similar system of examination and marking were introduced in America. Special delicate labels, which are destroyed when removed, are attached to each package of butter.

A small society is interested in egg exportation and follows a plan similar to that described for the butter industry.

## XV SWITZERLAND

### THE PEASANTS' UNION

This union, which has its headquarters at Brugg, is said to have not less than 150,000 members, chiefly farmers. It is connected with all the agricultural societies of Switzerland and its purpose is to consider agriculture in its political and economical aspects. Its work is carried on in twenty different sections. One section, having more independence than the others, is a scientific research bureau and receives appropriations from the government. The sections of the union are societies or groups of societies. There are about 3,000 confidential agents throughout the whole country who serve without pay and send information to headquarters in answer to special inquiries, and carry on propaganda work in districts when so directed.

The union publishes a paper which has a price-reporting department and gives weekly market reports. This is distributed as a supplement with other agricultural papers. There are issued 80,000 copies in German and 25,000 in French, every month. About 3,000 members of the society other than the confidential agents are designated to report prices for this supplement.

There is a bookkeeping branch which keeps accurate business records of 300 farms. These farms have been carefully selected and the farmers receive about fifty cents each a month for furnishing the data the society demands. This work has high educational value. It has been going on for eleven years, but even yet there are not many farmers who keep reports in the thorough manner recommended. The government pays in support of this work about \$3,000 a year.

This organization has recently established a cheese export society, which is a joint stock company with shares valued at nearly one half-million dollars, held by dairy unions. This society or company was organized to oppose an intended cheese dealers' combine. It aims to get the bulk of the Swiss trade under its own control and especially to develop business with America. Prices received for export cheese determine the milk price at home. The yearly production of milk is valued at about seven times the

value of cheese exports. It is argued that if the price of cheese can be raised a better price will be received for the great volume of milk consumed at home.

The union has given some attention to sickness and accident insurance. Occasionally it takes up other non-agricultural subjects.

There are twenty permanent employees. About \$5,000 is received annually from the government for maintenance of the secretary's office, where proposed laws and treaties receive special attention. It receives also about \$1,200 a year from its several sections, which pay about one cent a member each year. Last year it received about \$7,000 from so-called volunteer members who pay about twenty cents a year if farmers, or \$1 a year if societies. It receives from agricultural papers about two cents a year for each subscriber, making about \$2,000, and an additional amount from the agricultural papers for market reports, equivalent to about \$9,000 a year.

The agricultural societies of Switzerland may be divided in several groups. That they are active and influential may be judged from the fact that the total membership is three or four times as large as the total number of farms in the country.

The societies may be grouped as follows: chief agricultural societies; general cooperative societies; animal husbandry cooperative societies; credit cooperative societies; dairy cooperative societies and Alpine cooperative societies.

#### CHIEF AGRICULTURAL SOCIETIES

These societies are recognized by the government and receive appropriations from it. There are special societies for the German speaking population and for the French and Italian. One society is known as the Alpine Economic Society. Another is a garden society. Their work is chiefly educational and is carried on largely by lectures and short courses lasting a few days. Some of these societies hold agricultural shows and have special government funds therefor. A large show is held about every ten years for the entire country, the local shows being held in the intervening period. These societies do not hold livestock shows, however, as these are cared for otherwise.

**SWITZERLAND**



**FIG. 254. COOPERATIVE SALES SOCIETY BUILDING, WINTERTHUR**



**FIG. 255. SALESROOM OF THE COOPERATIVE SALES SOCIETY, WINTERTHUR**





## GENERAL COOPERATIVE SOCIETIES

These societies furnish supplies for members. One of the largest of them is located in Winterthur and is described more fully below. Similar societies, but not so large or so broad in scope or activities, are located in Berne and near Luzerne. There are also five or six smaller organizations of the same kind. These larger and smaller organizations are not united.

## EAST SWISS UNION OF AGRICULTURAL COOPERATIVE SOCIETIES

This union attracts unusual interest because of its large building at Winterthur, which cost over \$200,000, its large membership and the great variety of products supplied to members. It is said that there are no other cooperative societies as large and comprehensive as this one except in Denmark and in Hungary. This union has 174 affiliated societies representing about 14,000 members, most of whom are farmers. In some of the affiliated societies a large proportion of the members are working men. Most of the affiliated societies have membership of from fifty to one hundred.

As a rule no fee is charged for membership, but in some cases there is a charge of half a dollar to a dollar. Members are expected to buy all their supplies from the society in so far as they can be furnished. They must give three months' notice of intention to resign at the end of a year, and, under a legal requirement, they remain liable for the debts of the union for two years after resigning. If a member does not purchase supplies to the value of \$10 in a year he gets no dividend. It is said that the rule compelling an individual to make purchases from the society cannot be enforced. An affiliated society is expected to buy everything from the union and if it desires to withdraw must give four months' notice before the expiration of the year. An inspector of the union examines the books of the affiliated societies and can readily ascertain if purchases are being made elsewhere, in which case, if it were buying extensively elsewhere it would be expelled.

Advantages enjoyed by members include participation in dividends. Preference is given also to members when the society purchases articles which they may wish to sell. Members also receive a paper. When the main society sells at retail it charges the same

prices as the small affiliated cooperative society would, and the same price is charged all persons whether members or not.

There are ninety employees of the union in Winterthur. Their large building contains offices and storage rooms, a feed grinding mill, seed cleaning machinery, a coffee department with roasting apparatus, and an enormous wine cellar. The union does not operate manufactories of its own. The chief articles handled are fertilizers, feeding stuffs, potatoes, flowers, seeds, drygoods, hardware, leather goods, household utensils, and toys. The value of the stock carried at headquarters is said to be about \$300,000.

The union issues a catalog for some departments, but encourages managers of cooperative societies to come to headquarters and select their purchases. If \$20 worth is purchased from certain classes of goods the expenses of the trip will be allowed. Sample books of cloth go to the societies and orders are made from these samples. More expensive goods are ordered for the local societies only when the sale has been made. The cheaper grades are kept in stock. About forty per cent. of the local societies have stores in villages. The head man who acts as book-keeper is generally a farmer or teacher and receives from one to two per cent. of total sales. The shop helper gets from five to six per cent. of all small sales and must be on duty all the time. He receives also two per cent. of large sales. Sales of fertilizers do not go through the shops.

The union began in 1887 by selling agricultural articles only, and in 1897 added drygoods and other articles with the intention that small societies should be able to get all they wanted. It has had a hard fight with commercial interests. For a long time the union was boycotted by Swiss and German iron goods dealers who also boycotted any factory selling to the union. It had difficulty also in making purchases in America, having to resort to unusual methods to get its goods, even having them shipped to distant points and then re-shipped. But the opposition has largely subsided and there is a question as to whether it did not finally help the society more than injure it. This year the sales are said to amount to about \$2,000,000.

The union buys from affiliated societies a few articles as needed, especially wine and cheese, eggs and fruit, selling these to other

SWITZERLAND

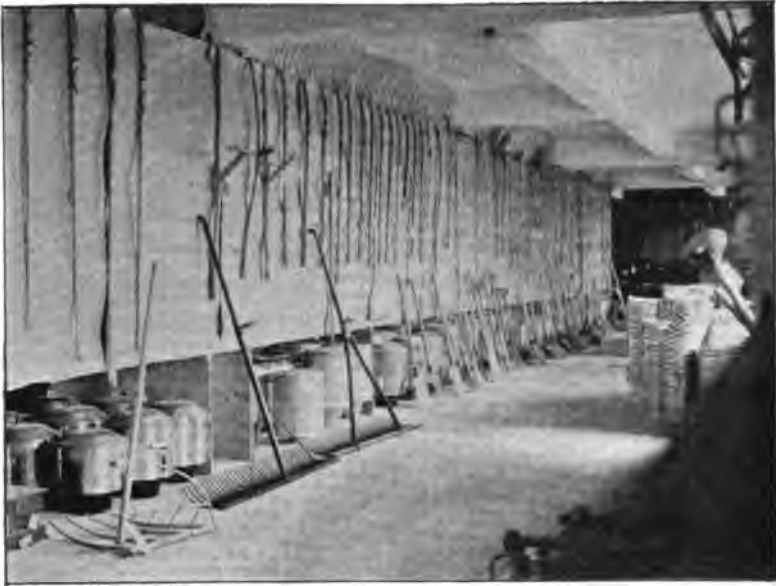


FIG. 256. SALESROOM OF THE COOPERATIVE SALES SOCIETY, WINTERTHUR



FIG. 257. SALESROOM OF THE COOPERATIVE SALES SOCIETY, WINTERTHUR





societies. It also buys quantities of cherries. The union is not obliged to take all that the members have to sell, but only what is needed to sell again to other members and such additional stuffs as can be disposed of.

#### UNION OF ZURICH AGRICULTURAL COOPERATIVE SOCIETIES

This is another central union and it has a membership of seventy societies representing five to six thousand members. Its principal function is to buy agricultural supplies for its members, and the principal articles purchased are fertilizers, cattle feeds and spraying materials. It also sells for its members small amounts of hay and straw. The members are not legally under agreement to buy everything from this society, but consider themselves morally bound to do so. The organization is supported from profits on sales.

#### OTHER COOPERATIVE SOCIETIES

There are other cooperative societies, those to care for, and handle, wine; to own and use threshing machines, to produce and sell alcohol, and for other purposes.

#### ANIMAL HUSBANDRY COOPERATIVE SOCIETIES

These may be classified according to breeds. They receive money from the government for prizes at competitions. The societies conduct bull sales and maintain breeding registers. Some societies are carrying on cow test work and some are endeavoring to do experimental work in connection with breeding and selection of sires and dams. Other cooperative societies are interested in swine breeding and are encouraging the introduction and use of Yorkshire boars with native sows.

#### COOPERATIVE CREDIT SOCIETIES

The Raiffeisen system is said to be little developed in Switzerland but has been growing slowly for about ten years until, at present, there are about 160 of these organizations. There are no cooperative mortgage societies in Switzerland, such as have gained so much prominence in Germany. Farmers patronize state banks

and savings banks, some of which are not founded for commercial purposes but exclusively for the convenience of the neighborhood. It is said that farmers have been having some trouble recently because of high rates of interest on small loans, and because banks giving credit on mortgages can recall loans. They do not do this, however, as long as the interest is paid regularly.

#### DAIRY SOCIETIES

These consist of local milk cooperative societies which are united in larger societies having as a chief purpose the regulation of prices. These societies are connected with the dairy export society already referred to. There is a union of Northeast Switzerland cheese and milk cooperative societies which has 342 cooperative societies in membership which pay entrance fees of \$2. There are also 108 individual memberships. Altogether there are over 8,000 members, representing nearly 40,000 cows.

The chief purpose of this organization is to secure a price for milk which is believed to have a fair relation to the cost of production. One of the best and most profitable acts of the society has been to arrange so that members sell their milk under contract two times a year, and times have been selected for making contracts when milk is scarce and therefore most sought after and most valuable.

The work of the society also has considerable value from the sanitary standpoint. It has strict rules governing milk production and members must deliver their milk to the society in accordance with these rules. About 268 of the affiliated societies sell their product wholly or largely for drinking. The society has six inspectors, thus attempting to do for themselves what is often done through official inspectors. A determined effort is being made to improve sanitary conditions of milk and cheese production and thus to better deserve fair prices. Printed rules for milk production are widely distributed.

In the future it is proposed to supply articles to members at reduced prices.

There are ten dairy unions similar to the one just described.

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ONE OF THE MANY FERTILE VALLEYS IN NEW YORK STATE.



**STATE OF NEW YORK**  
**DEPARTMENT OF AGRICULTURE**  
**CALVIN J. HUSON, Commissioner**

**Bulletin 67**

**Farms for Sale or Rent**  
**in New York**

**(Occupied and Unoccupied)**

**Compiled by**  
**CHARLES W. LARMON**  
**Chief, Bureau of Farm Lands and Labor**



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## PREFACE

New York State has a population of nearly 10,000,000 people within its borders, or one-tenth the population of the United States. Of this number nearly 8,000,000 reside in the fifty-two cities and 465 incorporated villages of the State. If this enormous number of non-food producing people is to secure its food-stuffs from their natural sources, it is the imperative duty of this department as well as of every agricultural agency in the State to encourage and stimulate agricultural production to the fullest extent.

It is undoubtedly true that a considerable area of land now included in the farms of the State should have been allowed to remain in forest, as at the time of clearing there was sufficient land, had it been properly worked, to supply the population of the State with all needed agricultural products. In this rough, sterile soil, denuded of timber, included in farms and afterwards neglected, is found all that land included in the term, "abandoned farms." Strictly speaking, there are no abandoned farms in this State. There are farms which lack farmers, but there are no parts of our agricultural lands upon which profitable farming of some kind cannot be done. The production per acre of any of the farm crops in the State is a complete refutation of the assertion, ignorantly stated, that our farm lands are cheap because they are poor or worn out.

As stated in previous bulletins, New York State farms are relatively cheap for several reasons.

First. The distribution of the public domain, which started with the passage by Congress of the Homestead Act, authorizing the free distribution of quarter sections of land to practically all comers, caused for years an unending procession of farmers from the East to the West where they succeeded, and whence in turn drew new recruits from New York farms.

Second. The financial rewards offered by our many cities, large and small, through the development and expansion of all lines of commerce and manufacturing, have attracted our farmers' sons and daughters more powerfully than in any of our sister states. These opportunities have been greater than elsewhere and they have been exhibited closer to our farmers.

Third. The very prosperity of our New York State farmers, evidenced by the fact that the percentage of mortgage indebtedness on

our farms is lower than that of almost any other state, has helped to depopulate our farm lands of the actual owners because they have retired from their farms to enjoy the easier life of the cities and villages, and the farms so left, in numbers greater than the demand, has always been a check upon any very appreciable rise in farm values.

Fourth. For many years after the public domain had been largely distributed, the value of farm products ruled lower than the cost of production on the higher priced eastern farms. Farming in the East ceased to be profitable and in consequence values of farm lands depreciated rapidly until the growth of population increased to such an extent as to cause the demand to exceed the supply of such products.

These considerations explain the conditions which lead to the publication of this and similar bulletins by this department. New York farms today offer unequalled opportunities to the farmer who is in the farming business to make money and who demands every necessary educational and social advantage. New York markets are the best. New York transportation, water, steam, or electric, is approached by that of no other state and New York highways furnish to all parts of the State the last and most necessary link to connect the farm with the consumer.

A personal investigation of all conditions surrounding the farm, as well as the farm itself, should by all means be made by any prospective purchaser, and New York State farms will creditably bear such an investigation, in which this department will gladly cooperate. The farms listed herein have been certified to this department by the supervisors of the towns in which they are located, but this department does not sell these farms nor does it act as agent for any of them.

It is our desire to have every acre of New York farm land occupied by the best possible farmer to the end that both the farmer and the farm may prosper, and the department stands ready to give any assistance in its power and all possible information to anyone interested in order to accomplish this desirable result.

During the present year greater interest has been manifested in the agricultural conditions of this State by large numbers of residents of other states who for various reasons contemplate a change; by those of this State who wish to engage in agriculture and by citizens of Canada and many foreign countries, indicating that these people realize the great opportunity they now have of purchasing productive, well improved farms at lower prices than prevail in any other part of the country, located as they are, close to the seaboard and the very best markets in the United States. In this connection we may properly quote the words of Ex-Secretary of Agriculture, James Wilson.

who, after an observation trip through a large part of the State, expressed himself as follows:

"The cheapest farm lands in the United States today with nearness to good markets, price of land and all other farm conditions considered, are east of the Alleghenies, and the low-priced farm lands of New York State are the best investments in America."

Later, when addressing the Pomona Grange, of Madison county, Mr. Wilson said:

"Hereafter when a young man with a few hundred dollars asks me or my department in what section he can engage in farming to the best advantage, I shall ask that he be directed to the possibilities existing throughout New York State. Here you have one of the most beautiful sections for homes to be found in this great country. I am astonished! It is far beyond my understanding why the people have gone away and left these farms — these rich valleys and well timbered hills, with numberless streams of splendid water on every hand, ideal for grazing and stock raising, for the production of fruit and dairy products. You have good schools, churches, substantial towns and intelligent people and some of the best and largest markets in the world at your very door. Your soils are not exhausted — they are strong, and with few exceptions are as productive as they ever were."

Questions relating to all phases of agriculture are constantly being received from those contemplating the purchase of farms in this State, especially questions in regard to farm locations, soils, crops raised, the live stock industry, farm improvements, markets, schools, churches, educational and social conditions, highways, railway and shipping facilities, taxes and climate. Interest in agriculture is rapidly increasing, owing to the increased value of agricultural products. That the present prices of products will continue there seems to be little doubt, as the United States is now importing large quantities of food-stuffs from foreign countries, especially meat products and cereals. The average prices prevailing for the principal crops show an increase during the last ten years as compared with the previous ten years, as follows: "corn 42 per cent, hay 33 per cent, oats 37 per cent, potatoes 28 per cent, wheat 36 per cent, and apples 9.5 per cent," notwithstanding the fact that receipts of apples at principal markets show an increase of 131 per cent during that period. If properly cultivated

and fully utilized, the farms of New York are capable of producing a large percentage of the foodstuffs now imported, and of maintaining large herds of cattle and flocks of sheep. A comparison of values of foodstuffs imported and exported during the last fifteen years is as follows:

	1898	1913	Six months ending Mar., 1914
Imports of foods. . . . .	\$190,000,000	\$405,000,000	\$244,000,000
Exports of foods. . . . .	590,000,000	502,000,000	217,000,000

These figures indicate a change of \$303,000,000 during the fifteen years.

The following editorial appeared in the *London Times* of June 8, 1914, designated as the "Food Number:"

"Eight years ago our imports of chilled and frozen meat from the United States were valued at over \$25,000,000. In 1912 they had sunk to \$75,000. This is by far the most striking change that is at present taking place in the food trade conditions of the world. It means that the once great export meat trade of the United States is now practically non-existent, and that unless the Americans take steps to increase their home production of this staple article of food they will not only cease to export, but will become to an increasing extent rival buyers in the markets of the world with ourselves and other nations. We are also threatened with the same menace in the egg trade by the United States and Germany, both of which, instead of being able to supply their own demand for eggs, are now buying from Denmark and Russia and other countries from whom we have hitherto derived supplies."

The number of cattle other than milch cows on farms in the United States between the years 1900 and 1914 shows a decrease of 15,000,000 head. During the same period there was a shrinkage of 12,000,000 in the number of sheep and 4,000,000 in swine. During the same period the population of the United States increased over 20,000,000. Meat products amounting to 83,666,000 pounds of beef and veal, or over fifty times as much as a year ago, were imported during the six months ending March, 1914, from Argentina, Australia, Canada and Uruguay. and 550,000 head of cattle, or more than double the number imported

in the corresponding period a year earlier, from Mexico for stocking and feeding purposes. It would therefore appear that an investment in the farm lands of this State at the present prices could be made without fear of loss and with every assurance of much higher values in the near future.

The number of farms offered for sale in this State is small in comparison to those offered in many other states. Large numbers that were formerly on the market have been withdrawn from sale, and a large proportion of those remaining are for sale only for the reasons previously stated. This State has 215,597 farms, and the number offered for sale in this bulletin represents only one-half of one per cent of that number. The farms offered for sale are located in all parts of the State, many of them in sections where the soil and climatic conditions are particularly adapted to special lines of agriculture and horticulture, and the great variety of soils throughout the State make specializing in farm products profitable.

The northern, eastern and southeastern parts of the State and the southern tier of counties along the Pennsylvania line are largely devoted to dairying and to the raising of hay, grain, and some fruit. The western and northwestern parts, extending along Lakes Erie and Ontario and into the central part of the State, are largely devoted to general farming; grain, fruit and vegetables being the principal crops. The principal fruits raised in the State are apples, peaches and pears, with large quantities of small fruits and berries. The section last named is particularly adapted to fruit raising, for the reason that the climate is tempered by the waters of the lakes and the temperature rarely goes below zero. The central section of the State reaches a greater altitude, and is devoted more particularly to general farming, with some dairying, and fruit raising of the hardier varieties.

The prices of the farms offered for sale in New York are greater in the western and fruit sections and lower Hudson Valley, and vary from \$60 to \$150 per acre for well-improved, well-located farms. Good dairy farms can be purchased at from \$20 to \$60 per acre. Large areas adapted to the raising of sheep, cattle and horses can be purchased at from \$10 to \$40 per acre. Land values are largely determined by the net value of the crops which the land is capable of producing and a few figures showing the relative value of many of the crops raised in this State, as compared to those of other sections of the country where lands are valued at from 200 to 300 per cent higher, show conclusively the capacity and value of New York State soils.

A comparison of the average crops of corn, oats, hay and potatoes taken from the latest government report for the year 1914 shows the production and value per acre in the following states:

1914	Corn, bu. per acre	Value per acre	Hay, tons	Value per acre	Oats, bu. per acre	Value per acre	Pota- toes, bu. per acre	Value per acre	Average value per acre corn, oats, hay and potatoes
New York.....	41	\$34 05	1.20	\$17 52	31 5	\$16 06	145	\$63 80	\$32 86
Ohio.....	39.1	23 85	1.13	15 14	30 5	13 72	95	50 35	25 76
Indiana.....	33.0	19 14	1.00	14 10	28.5	12 25	80	44 80	22 57
Illinois.....	29.0	17 69	1.85	12 24	29.3	12 89	60	36 60	19 85
Michigan.....	36.0	24 12	1.28	15 36	33.5	15 07	121	36 30	22 71
Wisconsin.....	40.5	26 33	1.75	16 27	27.0	11 61	124	37 20	19 35
Minnesota.....	35.0	18 20	1.89	11 53	28.0	11 20	114	36 48	19 35
Iowa.....	38.0	19 00	1.38	13 94	33.0	13 43	86	50 74	24 30
Missouri.....	22.0	14 96	.70	9 52	21 5	9 46	45	32 85	16 70
Nebraska.....	24.5	12 99	1.69	11 66	32.0	12 80	80	43 20	20 16
Kansas.....	18.5	11 65	1.51	11 17	33.5	14 07	62	47 74	21 16

The foregoing figures show conclusively the great fertility of the soil of this State, as the average crops in quantity are equal to or exceed those of the great grain producing states of the Union, and were much greater in value owing to the fine home markets with which the farmer is surrounded in this State. The same comparison holds true in other crops and especially the products of the dairy, the orchard, of vegetables, live-stock and poultry. The average value of the crops of corn, hay, oats and potatoes in this State exceed the average of the eleven states mentioned by \$10.61 per acre, while that of corn alone exceeds the average of the next highest state by \$7.09 per acre. The latest government reports for 1914 indicate that the value of all crops including dairy products and live-stock sold from the farms of this State exceed \$440,000,000 or an income equal to about \$28 per acre for the improved farm lands of the State. New York farms have been under cultivation for more than a century, but are producing more per acre today than ever before in the history of the State. Better and more scientific methods have been adopted and the farms of the State are rapidly increasing in fertility.

#### IMPROVEMENTS

The buildings on the farms of New York State are well built and substantial; the houses comfortable, convenient and well located and the outbuildings large and sufficient for all requirements of the farm. Beautiful shade trees in abundance surround the home, views of the surrounding country are fine, and in all parts of the State good

neighbors are to be found. Each farm has plenty of fruit for home use and often a surplus to sell. Practically all farms have sufficient timber for farm use; an ample supply of good water for domestic and farm purposes, often piped from springs to the house and outbuildings and the fields are supplied from springs and brooks; and the farms are well fenced and require but little, if any, drainage.

### CROPS

The various soils of the State are adapted to the raising of a great variety of profitable crops, which in the order of their importance, are: hay and forage, dairy products, potatoes, fruit, oats, vegetables, wheat, buckwheat, beans, rye, barley and a large number of other crops of great value in the aggregate. In many sections of the State the soil is adapted to the growing of large crops of alfalfa and in nearly all sections it can be grown with proper preparation of the soil. The value of the hay crop for 1914 exceeds \$80,000,000. Dairy products aggregate practically the same figures. Forty-nine million, six hundred thousand bushels of apples were raised in 1914 or more than the combined production of all states west of the Mississippi river; and 53,215,000 bushels of potatoes in the same year, producing a revenue of nearly \$25,000,000. The cities and towns of the State, having a population of 8,000,000, are distributed so evenly throughout the State that practically in all sections there is a good home market for farm products, thus saving largely in freight, shrinkage and commissions that the farmer residing at a long distance from his market is required to pay. Many of the more unimportant crops are produced at a considerable profit owing to good market conditions. New York City with a population of 5,250,000, and an additional population in the Metropolitan district aggregating 10,000,000, is reached within a few hours by express and freight from all parts of the State and requires vast quantities of produce in addition to what the farms of the State are capable of producing. From the New England States there is also a demand for New York State products, especially those of fruit, poultry, vegetables and the dairy. A large proportion of the farmers have erected silos and a large acreage of corn is raised for ensilage. Ensilage is essential for producing milk at low cost during the winter months and allows the farmer to carry on his dairy operations throughout the year and realize a good profit in the winter as well as in the summer months. New York City requires 28,000,000 forty-quart cans of milk annually and to supply this great quantity milk is shipped from all parts of the State. In those few sections too

far from shipping points to make shipment of the raw product profitable, cheese and butter factories and condensaries are in operation.

The following quotations of farm produce were taken from the latest market reports and show prevailing prices in New York, Albany, Syracuse and Buffalo and are about the average prices prevailing throughout the State:

### WHOLESALE MARKET REPORT

January 22, 1915.

	New York	Albany	Syracuse	Buffalo
Apples, bbl. ....	\$2.00-\$4.00	\$2.00-\$3.00	\$2.00-\$3.00	\$2.00-\$3.00
Beans, 100 lbs. ....	5.20- 7.25	5.00- 7.00	5.00- 6.00	5.00- 7.00
Butter, lb. ....	.32½	.32- .35	.32½	.33
Calves, live, lb. ....	.12¾	.12	.12½	.12
Calves, dressed, lb. ....	.18	.15- .16	.15	.15- .16
Cattle, beef (butcher stock) . ....	.08- .09	.08- .09	.08- .09	.08- .09
Cheese, lb. ....	.16½	.16½	.16½	.17
Chickens, live, lb. ....	.18- .20	.16- .18	.15- .18	.16- .18
Corn, bu. ....	.83	.83½	.80	.78
Ducks, live, lb. ....	.16- .18	.16	.15	.17
Eggs, fresh, doz. ....	.40- .46	.40	.40	.40
Fowls, live, lb. ....	.16- .20	.15	.15- .18	.15
Hay, alfalfa, ton. ....	23.00	20.00	16.00	17.00
Hay, clover, ton. ....	21.00	18.00	15.00	16.00
Hay, timothy, ton. ....	23.00	22.00	17.00	18.00
Hogs, live, lb. ....	.07½	.07½	.07½	.07½
Lambs, live, lb. ....	.08½	.08- .08½	.08½	.08- .08½
Oats, bu. ....	.61	.61	.58	.57
Onions, 100 lbs. ....	1.50	1.20	1.20	1.20
Potatoes, bbl. ....	1.80- 2.00	1.50	1.50	1.50
Rye, bu. ....	1.21	1.23	1.20	1.22
Straw, oat, ton. ....	12.00	10.00	10.00	10.00
Straw, rye, ton. ....	15.00	15.00	16.00	15.00
Turkeys, live, lb. ....	.22	.20	.20	.20
Wheat, bu. ....	1.50	1.50	1.45	1.45

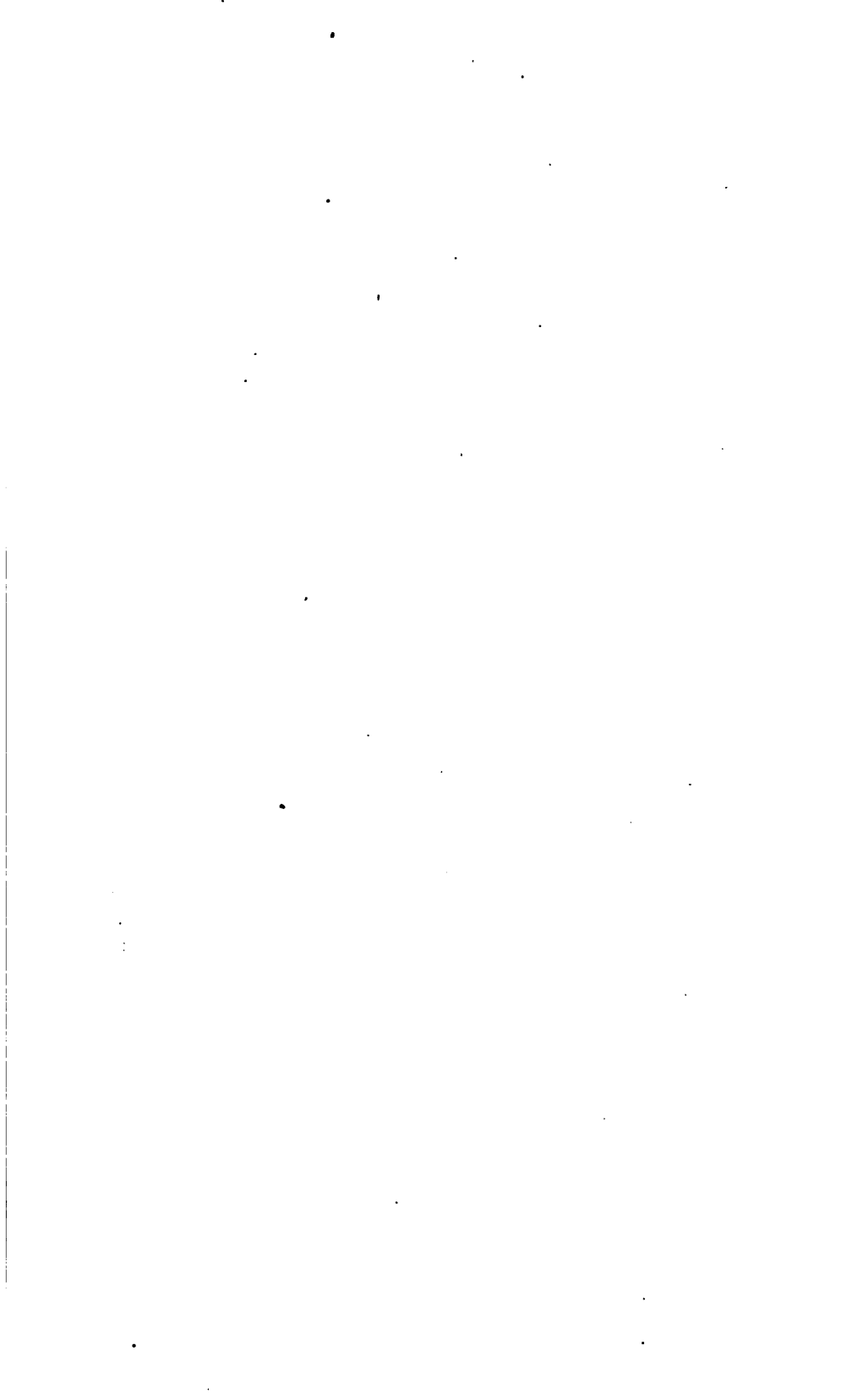
### FREIGHT RATES

The New York State farmer has a decided advantage in the low freight rates required to place his produce in the best markets of the country and at the seaboard. The rates as shown in the following table are, on an average, less than one-half those of points in Indiana, Illinois, Iowa and Missouri. This comparison shows that the New York farmer markets his produce at a cost lower than the Iowa farmer by \$4 per ton on grain; \$7 per ton on apples; \$6.50 per ton on cattle, hogs and sheep; \$6 per ton on hay; \$6.50 per ton on potatoes and vegetables; \$18 per ton on poultry and \$13.40 per ton on butter, an advantage in almost every instance equal to a good profit on his produce.



**600-ACRE NEW YORK FRUIT FARMS.**

In 1914 produced 49,600,000 bushels of apples — more than combined production of all states west of Mississippi River.



**RAILROAD RATES TO NEW YORK CITY FROM FOLLOWING POINTS  
PER 100 POUNDS, CAR LOTS**

	Syracuse and Geneva, N.Y.	Indianapolis, Ind.	Chicago, Ill.	Des Moines, Iowa.	Kansas City, Mo.
Apples .....	15¢	30¢	30¢	50½¢	57¢
Butter .....	30¢	60½¢	65¢	97¢	\$1.10
Cattle .....	15¢	26¢	28¢	47¾¢	50¢
Dressed meats .....	25¢	40¢	45¢	61½¢	63½¢
Eggs .....	30¢	60½¢	65¢	97¢	\$1.10
Grain and grain products.....	10¢	18½¢	16.7¢	30¢	33¼¢
Hay .....	15¢	26¢	30¢	45¢	52¢
Hogs .....	17½¢	28¢	30¢	53½¢	53½¢
Sheep .....	17½¢	30¢	30¢	52½¢	52½¢
Potatoes and vegetables.....	15¢	28¢	30¢	48½¢	50¢
Poultry .....	35¢	69½¢	75¢	\$1.14½	\$1.20

**DAIRYING AND STOCK RAISING**

Dairying and stock raising are important industries in New York. The soil is especially adapted to the growing of grasses suitable for the grazing of live stock; corn for ensilage is largely grown, as also many other forage crops. Ensilage corn usually produces from ten to twenty tons per acre and often more. The average price for milk is about 4 cents per quart. The raising of cattle, sheep and hogs for market has not been extensively carried on in late years, but with present high prices for meats of all kinds and lands suitable for the purpose so low priced, there can be no reason why this industry should not be fully and quickly developed. Young cows for the dairy have been selling in various parts of the State at from \$60 to \$100 each. The present number of sheep in the State is about 500,000; fifty years ago the number was nearly 5,000,000. The low price of wool and mutton for many years made this industry unprofitable and in consequence a change was made to dairying. Hogs can be raised in this State as economically as in any other part of the country, and prices for pork products are always good. Poultry raising is profitably carried on in New York State. Good local markets are always at hand for all poultry and eggs produced.

**HIGHWAYS**

New York State and its counties are expending about \$150,000,000 in highway improvements. Good macadam roads provide a fine system of highways that reach to all farming sections. Automobile parties from all parts of the United States come to New York each season to enjoy this excellent system of improved highways. Practically all the roads of the State are so well improved that heavy loads can easily be hauled over them. The great 2,000-ton barge canal ex-

tending from Buffalo to the Hudson river and north to Lake Champlain will greatly reduce the cost of transportation. For this work the State is expending \$125,000,000.

### EDUCATION

The school system of New York is noted for its excellence. In addition to country schools, which are located conveniently in all parts of the State, there are good high schools in the nearby villages, and many colleges and institutions for higher education throughout the State. Agricultural courses are provided in nearly all of these institutions, while the State College of Agriculture with its various courses, also the secondary agricultural schools, provide at State expense scientific agricultural education for those desiring it. The Agricultural College at Ithaca and the Experiment Station at Geneva are constantly engaged in working out the difficult agricultural problems, and they offer valuable assistance to the farmer through the medium of their reports.

### TAXES

In comparison to other sections of the country taxes upon farm property are unusually low and in most sections of the State average about 1 per cent on the actual value of the land. Live-stock and tools are seldom, if ever, assessed. Taxes for State purposes are raised indirectly and are derived from excise, inheritances, corporations and various minor sources. The cities of the State represent 85 per cent of assessed valuation of the State, leaving but 15 per cent to be assessed upon the farms in the event that direct taxes should ever again be resorted to. The funds now raised by taxation are for county, township and school purposes.

### COOPERATION

The Legislature has recently enacted laws for the licensing and investigation of all commission merchants handling farm produce and has further provided for the establishment of cooperative societies throughout the State. Some sixty such societies have already been organized and the prices obtained for produce sold through these societies has resulted in much better profits being received than formerly and the purchase of supplies has resulted in a material saving.

### RAINFALL

The rainfall throughout the crop growing period is so evenly distributed that crop failure in New York is practically unknown. The average precipitation of the State varies somewhat in different local-

ities. On Long Island and the lower Hudson River counties the average is about 50 inches and varies from that to 35 inches in some other sections of the State; the greatest in June and the least during October.

#### TEMPERATURE

The temperature of New York State varies but little from that of states in about the same latitude east of the Missouri river, seldom exceeding a temperature of 90 degrees — and that only for brief periods during the midsummer months — with a minimum of 20 degrees to 30 degrees below zero in the extreme northern and elevated portions of the State. Damaging frosts during the growing crop season are so infrequent that it is unnecessary to consider them as factors in the situation, the seasons practically always being of sufficient length to mature all crops. The weather during the fall months is generally ideal for harvesting.

#### THE COUNTY FARM BUREAU

One of the most potent influences in improving agricultural conditions in the State is the County Farm Bureau. About one-half of the counties of the State now have these organizations, and their work is highly satisfactory and becoming more and more appreciated by the farmer. The functions of the bureau cover a wide range of subjects, but all tend toward better agricultural methods and more comfortable, pleasant and profitable farm life. Prof. M. C. Burritt, State Director of Farm Bureaus, outlines the principal functions of the bureaus as follows:

1. The federation and organization of all the agricultural forces of the county to a common purpose.
2. Agricultural leadership in its broad sense.
3. Organization of cow testing, seed improvement, and similar associations.
4. The organization of buying and selling agencies for supplies and products.
5. The study of the local economic conditions of the county with the viewpoint of affirming or improving, as the case may be, the local farm management and farm practice of the county.
6. The demonstration of better methods of farm management and practice.
7. The giving of personal advice to farmers on farm practice and farm management.

## LIST OF COUNTY FARM BUREAU AGENTS

County	Agent	Address
Allegany.....	F. C. Smith.....	Wellsville
Broome.....	E. R. Minns.....	Binghamton
Cattaraugus.....	H. K. Crofoot.....	Olean
Cayuga.....	J. R. Teall.....	Auburn
Chautauqua.....	H. B. Rogers.....	Chautauqua
Chemung.....	M. E. Chubbuck....	Elmira
Clinton.....	C. B. Tillson.....	Plattsburg
Cortland.....	E. H. Forristall....	Cortland
Delaware.....	T. M. Avery.....	Walton
Dutchess.....	F. H. Lacy.....	Poughkeepsie
Erie.....	W. L. Markham.....	Buffalo
Franklin.....	O. F. Ross.....	Malone
Herkimer.....	Charles A. Taylor...	Herkimer
Jefferson.....	F. E. Robertson.....	Watertown
Monroe.....	L. A. Toan.....	Rochester
Montgomery.....	A. S. Merchant.....	Canajoharie
Nassau.....	L. R. Simons.....	Mineola
Niagara.....	E. H. Anderson.....	Lockport
Oneida.....	G. W. Bush.....	Utica
Onondaga.....	S. A. Martin.....	Syracuse
Orange.....	Thomas E. Milliman.	Goshen
Oswego.....	E. V. Underwood....	Oswego
Otsego.....	F. S. Barlow.....	Cooperstown
St. Lawrence.....	C. S. Phelps.....	Canton
Saratoga.....	A. M. Hollister....	Saratoga Springs
Tompkins.....	V. B. Blatchley.....	Ithaca
Ulster.....	Wallace Hook.....	Kingston
Wyoming.....	H. M. Bowen.....	Perry

## GENERAL

Statistics show that 80 per cent of the ten million population of New York State reside in cities and villages; this means that only a portion of the remaining 20 per cent are producers. Census figures show that less than four hundred thousand are active farm workers. The immense home market created by this vast population is only partially supplied by produce grown on New York farms. The savings of New York farmers by reason of home markets is equal to about 25 per cent of the receipts from crops. If all the available land in New York State were under intense cultivation only a small proportion of the necessary

food supplies for the people of the State would even then be produced upon them.

The best fruit lands in this State can be purchased at from \$50 to \$150 per acre, and crops as good as those of California, Oregon, Colorado or any other state can be raised upon them, yet the prices of such lands in those states often run from \$500 to \$1,000 per acre.

The farms to which we are calling attention are farms possessing rich soil, fine buildings and other improvements, well located with respect to markets, schools and churches, upon good highways and surrounded by all the features necessary for pleasant and profitable farm life. Such farms are low-priced in comparison with farms in other sections of the country, but are not "cheap" farms in the sense that the word is usually employed.

The areas in New York State devoted to corn raising products an average practically the same as Illinois and Iowa, while the price of corn in the local markets of this State is 20 cents to 25 cents per bushel greater. The same statement is true in relation to wheat, oats, barley and other grain crops, especially buckwheat, which can be raised almost anywhere in the State and commands a price that usually makes this crop very profitable. The New York farm is within a few hours' ride of one-half the population of the United States and has a large proportion of this population for its markets.

The average crop of wheat for the United States is 14 bushels per acre, of Germany 29 bushels, of England 37.5 bushels and of Denmark 40 bushels. The New York State counties raising wheat to any extent produce an average of 24 bushels per acre and the average price is at present \$1.40 per bushel. The New York farmer receives \$5.08 per acre more than the Illinois farmer for his wheat and \$5.68 more than the Iowa farmer. The New York State farmer received during a period of ten years \$42 per acre more for his potato crop than did the central western farmer.

Alfalfa is becoming one of the important crops of New York State. Several counties showed a gain in acreage last year of 50 to 75 per cent over the previous year. Several counties each have more than 5,000 acres in alfalfa, from which three crops of about a total of five tons per acre is harvested.

The census figures show that New York dairy cows are of greater value than those of any other state and the total value received from dairy products was also greater.

Thousands of young calves, the offspring of choice dairy cows, are slaughtered annually and go into veal and other products. With two-year-old heifers selling at from \$50 to \$100 each, no more profitable

crop can be raised upon the low-priced farms of the State than young cattle.

Large areas of New York lands ideal for sheep raising can be purchased at from \$10 to \$25 per acre. These farms all have good improvements upon them and are well located with respect to markets. The present price of mutton, lamb and wool make this industry highly profitable. There is also great demand for registered sheep of the various breeds and prices for such stock is always good.

New York State needs thousands of good farmers. Every condition for successful farming and stock and fruit raising is here and only the manager and worker is necessary to reap the benefit.

The population of the State is growing at the rate of 250,000 per year. The population of the farms is at a standstill.

Thousands of acres of rich muck lands, capable, when improved, of producing crops at from \$200 to \$600 per acre, can be purchased at extremely low prices and the cost of improvement will be comparatively small. Improved muck lands under cultivation are valued at from \$200 to \$1,000 per acre in the State. A large proportion of the soil under proper cultivation will produce large crops of red clovers, alsike, alfalfa and other grasses. These grasses are valuable, not only for use upon the farm, but they return to the farmer from \$3 to \$10 more per ton than in the West.

Cheese and butter factories are located in nearly all parts of the State; milk shipping stations practically everywhere. For the city of New York alone more than 28,000,000 forty-quart cans of milk are required annually, and over \$80,000,000 is paid to producers for dairy products in this State. Small fruits and berries are profitably raised. Truck farming is highly profitable.

Every fowl in the State finds a market at 20 cents each above the average of the states of the central west, and eggs usually 5 to 10 cents a dozen more.

The State Department of Agriculture will gladly mail to all interested parties bulletins and circulars covering all lines of agriculture and horticulture in this State, will investigate and report free of expense upon any particular farm that a prospective purchaser may designate and be of such assistance as possible in helping anyone wishing to secure a farm and engage in farming in this State.

CALVIN J. HUSON,  
*Commissioner of Agriculture.*

Compiled by

CHARLES W. LARMON,

*Chief, Bureau of Farm Lands and Labor.*

## **FARMS THAT MAY BE RENTED, INDICATED BY NUMBER**

11, 24, 26, 27, 36, 40, 41, 44, 63, 65, 69, 75, 82, 89, 94, 98, 100, 101, 102, 114, 117, 134, 145, 147, 150, 156, 160, 168, 175, 193, 199, 206, 227, 257, 258, 259, 266, 269, 273, 280, 282, 286, 307, 309, 312, 319, 321, 322, 323, 327, 328, 334, 348, 349, 387, 460, 462, 467, 469, 472, 481, 483, 484, 486, 489, 548, 553, 561, 571, 586, 587, 589, 595, 598, 635, 636, 641, 642, 651, 655, 656, 657, 660, 684, 722, 726, 728, 731, 733, 734, 737, 743, 744, 759, 760, 785, 790, 793, 794, 797, 798, 801, 803, 843, 853, 854, 855, 865, 875, 879, 880, 888, 889, 890, 892, 895, 900, 908, 915, 921, 922, 923, 927, 937, 941, 973, 975, 976, 993, 1005, 1010, 1012, 1014, 1020, 1021, 1032, 1036, 1037, 1038, 1063, 1064, 1065, 1066, 1069, 1072, 1073, 1074, 1087, 1090, 1091, 1092, 1094, 1101, 1102, 1107, 1115, 1129, 1133, 1135, 1136, 1137, 1139, 1140, 1142, 1143, 1144, 1145, 1146, 1148, 1150, 1151, 1154, 1156, 1158, 1159, 1160, 1163, 1166, 1167, 1171, 1181, 1182, 1183, 1184, 1189, 1198, 1220, 1228, 1229, 1230, 1234, 1235, 1240, 1247, 1248, 1251, 1253, 1255, 1258, 1260, 1268, 1270, 1274, 1301, 1304.



# NEW YORK FARMS

## ALBANY COUNTY

Area, 527 square miles. Population, 173,666. Number of farms, 3,146. Average value of farm lands per acre, \$49.61. Annual total precipitation, 38.77 inches. Annual mean temperature, 50.3°. County seat, Albany.

Located in the eastern part of the state on the western bank of the Hudson river.

Surface features are undulating and hilly, with a general drainage to the east. The soil upon the intervalles is a deep, rich alluvial loam. A considerable extent of the northeastern portion of the county is sand with strips of clay along the streams. Between this sand region and the foothills of the Helderbergs is a belt of clay and gravelly loam, very productive. Rye, barley, hay, potatoes, vegetables, dairy products and poultry are the chief products. The county is traversed by excellent lines of communication, by steam, water and trolley.

The educational and religious advantages are, like all the counties of the state, unsurpassed. Besides the excellent city schools there are 146 district schools, and a State Normal College located at Albany. There are about 1,000 miles of state and county improved roads.

The value of all the farm property is \$17,742,896, an increase of 11.8 per cent. since 1900. Two thousand nine hundred and forty-six farms report domestic animals consisting of dairy cows, 13,483; horses, 8,780; swine, 13,607; sheep, 17,070; poultry, 171,339. There are fourteen agricultural organizations for the purpose of promoting farming interests and social life on the farm.

### TOWN OF BEENE

Population, 1,758

No. 1.—Farm of 131 acres; located 7 miles from Middleburgh P. O., R. D. 2 and railway station on line of M. & S. Ry.;  $\frac{1}{2}$  mile from school; 2 miles from Methodist church; 2 miles from butter factory. Highways, in good condition. Nearest village, Middleburgh, population 1,114, reached by highway. General surface of farm, level and rolling. Nature of soil, loam. Acres in meadow, 86; in pasture, 20; in timber, 25—maple, beech, and hemlock. Acres tillable, 106. Fruit; apples, plums, pears, and cherries. Best adapted to general farming. Fences, chiefly wire, in good condition. House, 12 rooms, in good condition. Outbuildings; barn, 55x40; another barn, shed and hen house, in good repair. House, barns and fields watered by wells and creek. Crystal Lake, 3 miles distant. Occupied by tenant. Price, \$2,700. Terms, \$2,000 cash. Address Philip Ensinger, owner, R. D., Middleburgh, N. Y., or Tator & King, agents, Middleburgh, N. Y.

No. 2.—Farm of 143 acres; located  $\frac{2}{3}$  miles from So. Berne P. O.; 13 miles

from railway station at Voorheesville on line of D. & H. Ry.; 1 mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from condensing plant. Highways, in good condition. Nearest city, Albany, population 100,253, distance 24 miles, reached by highway. General surface of farm, level. Altitude, 1,200 feet. Nature of soil, loam. Acres in meadow, 10; in pasture, 10; in timber, 10; tillable, 120. Fruit; apples and pears. Best adapted to hay, oats, barley, buckwheat, rye, corn and potatoes. House, 6 rooms, and small store room. Outbuildings; horse and cow stable, granary; all in good condition. Watered; house by well; barns by well; fields by springs. Occupied by tenant. Reason for selling, old age. Price, \$2,000. Terms,  $\frac{1}{2}$  cash, balance on time to suit purchaser. Address John W. Hays, owner, Brookview, N. Y.

### TOWN OF BETHLEHEM

Population, 4,413

No. 3.—Farm of 133 acres; located 3 miles from Selkirk P. O., R. D. 1;  $\frac{3}{4}$  mile from railway station at Wemple on line of West Shore Ry.; 1 mile from school; 1 mile from church. Highway in

good condition. Nearest city, Albany, population, 100,253; distance, 6 miles reached by rail and highway. General surface of farm, chiefly level. Nature of soil, good. Acres in meadow, 67; in pasture, 60; in timber, 6; tillable, 55. Orchard consists of apples, pears and cherries. Best adapted to hay, rye, wheat, potatoes and gardening. Fences, wire, in good condition. House; 8 rooms, in good condition. Outbuildings; wagon house, cow shed with loft, hog pen, chicken house, corn crib, all in good condition. Watered; house by good well and cistern; barns by large cistern and spring. Hudson River 1 mile distant. Occupied by tenant. Price, \$7,500. Terms, \$3,000 cash, remainder on mortgage. Owner will rent. Address Mrs. John F. Shafer, owner, Selkirk, Albany, N. Y.

#### TOWN OF COEYMANS

Population, 4,252

No. 4.—Farm of 300 acres; located  $\frac{1}{2}$  mile from Ravena P. O.; 1 mile from railway station, on line of W. S. R. R.;  $1\frac{1}{2}$  miles from school; 1 mile from churches; 6 miles from butter factory. Highways, hilly but good. Nearest city, Albany, population, 100,253, 13 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, limestone. Acres that can be used as meadow, 80; in natural pasture, 100; in timber, about 100, pine, hickory, medium quality. Acres tillable, 80. Fruit, apple trees. Best adapted to grain and hay. Fences, stone, fair condition. House, 6 rooms, fair condition; 1 small barn. House watered by well and cistern. Reason for selling, to settle an estate. Price, \$3,000. Terms, cash. Address Estate of William Fuller, owners, Box 14, New Baltimore, N. Y.

#### TOWN OF COLONIE

Population, 8,385

No. 5.—Farm of 30 acres; located  $3\frac{1}{2}$  miles from Watervliet P. O.; 1 mile from Schenectady and Troy trolley line;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches; highways macadamized. This farm is 4 miles from Watervliet;  $4\frac{1}{2}$  miles from Troy; 5 miles from Albany, and 6 miles from Cohoes. Surface of farm, nearly level. Good soil, sandy loam. Acres in timber, 4; acres tillable, 26. Fruit, large apple orchard and all kinds of small fruit. Best adapted to general crops and gardening. House, large, 14 rooms. Outbuildings, large

barn, carriage barn, two hen houses, hog house and corn house, all in good condition and painted. Watered by well, springs and brooks. Occupied by owner. Reason for selling, ill health and advanced age of owner. Price, \$5,200. Fine wood lot. Terms, mortgage of \$1,200 can remain. Address Mrs. M. Babcock, owner, Watervliet, N. Y., or W. B. Vail, agent, 469 State St., Schenectady, N. Y.

#### TOWN OF GUILDERLAND

Population, 3,333

No. 6.—Farm of  $40\frac{1}{2}$  acres; located 3 miles from Altamont P. O., R. D. 2;  $1\frac{1}{2}$  miles from railway station at Meadowdale, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from Reformed and Lutheran churches. Highways, good. Nearest large village, Altamont, population 674, 9 miles distant; Schenectady, 11 miles distant; Albany, 13 miles distant; reached by both railroad and highway. Surface of farm, nearly level. Soil, good. Acres in meadow, 30; in timber, 1; all tillable. Fruit, 40 plum, 40 apple, 19 cherry, 10 peach and 12 pear trees. Best adapted to corn, rye, hay and oats. Fences, in good condition. House, 21x40, in fine condition. Main barn, 26x40; wagon house attached, 18x50; horse barn, 18x40; stables attached; hog pen, 15 feet square; hen house, 12x30; all in good condition. Watered by wells and never-failing springs. This property is located 1 mile from the Helderberg Mountains, 4 miles from Thompson's Lake, and 2 miles from Indian Ladder. Occupied by owner. Reason for selling, advanced age of owner. Price, \$3,000. Terms, \$1,500 down, balance on mortgage. Address Aaron Van Schaack, owner, Altamont, N. Y., R. D. 2.

No. 7.—Farm of 81 acres; located  $\frac{1}{2}$  mile from Guilderland Center P. O.;  $\frac{3}{4}$  mile from railway station at Guilderland Center, on line of West Shore Ry.;  $\frac{1}{4}$  mile from school and churches;  $\frac{3}{4}$  mile from milk station. Highways, macadamized, good. Nearest cities, Albany, 11 miles, population 100,253 and Schenectady, 8 miles, population 72,826, reached by rail and highway. Surface of farm, level. Altitude, high. Soil, gravelly, good. Acres in meadow, 25; acres tillable, 81. Fruit, 950 apple, 200 pear, 40 cherry and 25 plum trees. Best adapted to rye, corn and hay. Fences, wire and

board, good. House, 30x40, 13 rooms, good. Outbuildings, barn, 38x52; wagon house and horse stable, 24x48; carriage house, 16x24; shed, 20x38; hen and pig house, 14x32; cow stable, 18x32; ice house and cream room, 14x20, good. Watered, house by well and cistern; barns, by two large cisterns; fields, by well. This farm is 3 miles from Helderberg Mountains, 6 miles from Thompson's and Warner's Lakes,  $\frac{1}{2}$  mile from the Normanskill and 11 miles from Hudson River. Occupied by tenant. Reason for selling, owner has other business. Price, \$9,000. Terms, \$3,000 cash. Address Ira Hurst, owner, Guilderland Center, N. Y.

No. 8.—Farm of 81 acres; located 1 mile from Fullers P. O., R. D. No. 1, and railway station, on line of W. S. R. R.;  $\frac{1}{4}$  mile from school,  $\frac{1}{2}$  mile from Methodist church and 1 mile from milk station, milk also collected at door. Highways, good. Nearest city, Schenectady, population 72,826, 5 miles distant, reached by rail or highway. General surface, level and some rolling. Nature of soil, sandy loam. Acres that can be used as meadow, 68; in natural pasture, 5; in timber, 8, hemlock and hard wood. Acres tillable, 73. Fruit, 50 apple, 4 cherry, 6 pear, 3 plum and 20 hickory trees. Best adapted to grain or gardening. Fences, wire, good condition. House, 24x50, 2 stories and wing, fair condition. Outbuildings, barn, 50x50, just been repaired; shed, stables and other buildings, in fair condition. House watered by wells and cistern; barns by hydraulic ram pumps from creek. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$1,500 cash, balance on mortgage. Address George J. Chamberlin, owner, Fuller, N. Y.

#### TOWN OF KNOX

Population, 1,007

No. 9.—Farm of 200 acres; located  $1\frac{1}{2}$  miles from P. O., R. D.;  $4\frac{1}{2}$  miles from railway station at Altamont, on line of D. & H. R. R.;  $1\frac{1}{2}$  miles from school and churches and 3 miles from butter factory. Highways, good. Nearest large village, Altamont, population 674,  $4\frac{1}{2}$  miles distant, reached by highway. Surface of farm, level and rolling. Soil, limestone and loam. Acres in meadow, 60; in natural pasture, 25; 10 acres in rye; in timber, 15, hemlock, beech, etc. Acres tillable, 185. Fruit, about 50 apple trees, pears and currants. Best adapted to alfalfa, hay, oats, rye,

buckwheat, potatoes and corn. Fences, wire, wall and rail, in fair condition. House, 20 rooms, 20x60, in fair condition, built for two families. Outbuildings, main barn, 40x54; stables for 9 horses and 15 cows; hay barn, 42x36; wagon house, 40x20; shed and hen house, 24x50, in fair condition; hog house, 12x18, and hen house, 10x12, new. Watered, house by cistern and well; barns, by pond and wells; fields, by ponds, wells and springs. This farm is 4 miles from Thompson's and Warner's Lakes, both noted summer resorts. Reason for selling, to settle an estate. Price, \$4,000. Terms, \$1,500 down, balance on mortgage. Address Millard Frink, owner, Altamont, N. Y.

No. 10.—Farm of 170 acres; located  $1\frac{1}{4}$  miles from Berne P. O., R. D. 1; 5 miles from railway station at Altamont, on line of D. & H. R. R.;  $1\frac{1}{4}$  miles from school and Protestant churches; 3 miles from cheese factory; 5 miles from milk station. Highway, State road. Surface of farm, part rolling, sloping to east. Soil, fertile loam. Acres in meadow, 160; in timber, 10, pine, hemlock, elm and ash. Acres tillable, 160. Fruit, 50 apple, 12 pear, 15 plum and 5 cherry trees; also currants, berries and grapes. Best adapted to hay, oats, buckwheat, corn and potatoes. Fences, stone and wire, good condition. House, 46x24; wash house and wood house, 20x24. Outbuildings, barn, 40x46, shed attached, 24x46; barn, 22x70, with 5 stalls for horses; wagon house, 24x60; sheep house, 20x30; ice house, 20x16; hog house, 16x24; machine house, 26x36; hen house, 16x24. Watered, house by well and cistern, barns by well, fields by never-failing spring. This farm is 5 miles from Thompson's and Warner's Lakes. Occupied by tenant. Reason for selling, ill health of owner. Price, \$6,000. Terms, cash or part cash and remainder on easy terms. Address Amaziah Saddlemire, owner, Knox, N. Y., Box 33.

No. 11.—Farm of 180 acres; located 4 miles from Berne P. O., R. D. 1; 7 miles from railway station at Altamont, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{4}$  miles from Protestant churches; 4 miles from cheese factory and milk station; 7 miles from milk condensing plant. Highways, good. Nearest large village, Altamont, population 674, 7 miles distant, reached by highway. Surface of farm, mostly level. Soil, fertile loam. Acres in meadow,

150; in timber, 30, pine, hemlock, beech and maple. Acres tillable, 150. Fruit, 40 apple, 6 pear and plum trees. Best adapted to hay, oats, buckwheat, corn, potatoes and hops. Fences, stone and wire. House, 32x24, with kitchen and wood house attached, 20x20, good condition. Outbuildings, good barn, 32x46; barn, 32x50; cow barn, 32x40; wagon house, 20x26; hog house, 20x44; hog house, 16x20. Watered, house by cistern and well, barns by creek and well, fields by creek and spring. Occupied by tenant. This farm is 6 miles from Thompson's and Warner's Lakes. Reason for selling, ill health of owner. Price, \$5,000. Terms, cash or part cash. Address Amaziah Saddlemire, owner, Knox, N. Y., Box 33. Owner will rent.

## TOWN OF NEW SCOTLAND

Population, 2,834

No. 12.—Farm of 180 acres; located 4 miles from Voorheesville. P. O. and railway station, on line of D. & H. and W. S. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from Protestant church. Nearest city, Albany, 12 miles distant, population 100,253, reached by rail and high way. Surface of farm, quite level. Soil, mostly limestone. Acres in natural pasture, 10; in timber, 40, hemlock, pine and hard wood. Acres tillable, 120. Fruit, a few apples. Best adapted to grain and hay. Fences, in fair condition. Large house. Outbuildings, large and in fair condition. Watered, house by wells, barn by pond, fields by springs. Occupied by tenant. Reason for selling, owner a widow and cannot work property. Price, \$3,500. Terms, easy. Address Ellen Hendrickson, owner, Clarks-ville, N. Y.

No. 13.—Farm of 80 acres; located  $2\frac{1}{2}$  miles from Feura Bush R. R. station; creamery, schools, churches, stores, blacksmith shops, bakery, saw mill, etc. Within  $1\frac{1}{2}$  miles of daily bus line to Albany. Improved highway leads to two county roads; 11 miles from Albany population 100,253. Surface of farm rolling. Soil, part loam, part stony but good. Acres in meadow, 25; timber, 10, hemlock, pine and hard wood. All tillable except woodland. Fruit, about 50 apple and a few pear trees. Adapted to corn, oats, rye and hay. Fences, in fair condition. House, 24x28, two stories and attic, kitchen and wood house attached, 12 rooms, fine condition. Outbuildings,

barn, 30x52; horse stable, 30x16, shed attached; corn house, wagon house, hog and tool house, all in fair condition. House watered by well, never dry; water near barn never fails. Large creek, 28 rods from farm. This farm is  $2\frac{1}{2}$  miles from Lawson's Lake, a summer resort, and 2 miles to foot of Helderberg Mountains. Reason for selling, owner unable to work farm. R. F. D. daily by house. Price, \$50 per acre. Terms, one-half down, balance on long time. Address James H. Slingerland, owner, Feura Bush, N. Y., R. F. D. 1.

## TOWN OF RENSSELAERVILLE

Population, 1,809

No. 14.—Farm of 187 acres, 2 miles from Preston Hollow and 14 miles from Middleburg. Roads in the vicinity, good. Nature of soil, sand and gravelly loam. 30 acres of meadow; 50 acres of natural pasture; 37 acres of timber; about 100 acres tillable. Fruit, orchard of 30 trees. Adapted to all kinds of crops. Altitude, 1,500 feet. Fences, stone, in good condition. House, 30x40, 2 stories. Barn, 30x40, 2 stories. Wagon house and sheep barn. Premises watered by spring. Catskill Mountains 12 miles distant. Reasons for selling, poor health of the owner. Price, \$2,000. Terms, half cash. Name and address of owner, J. M. Watson, Preston Hollow, N. Y.

No. 15.—Farm of 180 acres, located  $1\frac{1}{2}$  miles from Preston Hollow P. O., 13 miles from railway station at Middleburgh, on line of M. & S. Ry., 1 mile from school,  $1\frac{1}{2}$  miles from churches and butter factory. Highways, good. Nearest large village, Middleburgh, population 1,114, reached by highway. Surface of farm, part level and part rolling. Altitude, 650 feet. Soil, good loam. Acres in meadow, 145; in natural pasture, 20; timber, 15, hemlock enough for farm use. Acres tillable, 165. Fruit, 60 apple trees, also some plums and cherries. Best adapted to hay, oats, rye, buckwheat, corn and potatoes. Fences, mostly wire, in good condition. House, 14 rooms, good condition. Outbuildings, barn, 26x54; shed and wagon house, 64x20; hog pen; barn, 20x40; stable for horses, 16x24, good condition. Watered, house, by well; barns and fields, by spring. Farm is 3 miles from Crystal Lake. Occupied by owner. Reason for selling, advanced age of owner. Price, \$3,500. Terms, \$2,500 down and balance on mortgage at 5%. Address



**A MODERN NEW YORK COUNTRY SCHOOL HOUSE.**



**ONE OF THE NEW STYLE NEW YORK FARM HOMES.**





Clark White, owner, Preston Hollow, N. Y. or L. J. King, agent, Middleburgh, N. Y.

No. 16.—Farm of 84 acres, located 8 miles from Middleburgh P. O., R. D. No. 2 and railway station, on line of M. & S. R. R.; 1 mile from school; 2 miles from butter factory and Protestant churches. Highways, somewhat hilly. Surface of farm, part level and some hilly. Altitude, 600 feet. Soil, gravelly loam. Acres in meadow, 50; in natural pasture, 14; in timber, 20, mostly hardwood; acres tillable, 64. Fruit, some pears and 25 apple trees. Best adapted to general farming. Fences, wire and stone, fair. House, 5 rooms, needs some repairs. Large barn with shed attached. Watered by spring and stream. This farm is 2 miles from large lake. Unoccupied. Reason for selling, owner has other farms. Price, \$600. Terms, \$400 cash, balance on mortgage at 5%. Address Hezekiah Beirut, owner, R. D. Middleburgh, N. Y., or M. L. Tator, agent, Middleburgh, N. Y.

No. 17.—Farm of 160 acres; located 10 miles from Middleburgh P. O., R. D. No. 2 and railway station, on line of M. & S. R. R.;  $\frac{3}{4}$  mile from school; 2 miles from butter factory and Protestant churches. Highways, good. This farm is 2 miles from State road, where auto bus line starts to Albany. Surface of farm, part level and part rolling. Altitude, 600 feet. Soil, gravelly loam. Acres in meadow, 115; in natural pasture, 20; in timber, 25, maple, oak, hemlock and basswood. Acres tillable, 135. Fruit, 2 acres orchard and some small fruit. Best adapted to general farming. Fences, wire and stone, fair. House, 25x35, with addition, 12x15. Outbuildings: barn, 30x40, good repair; barn, 35x50, fair repair, has large shed attached, 18x30, and hog pen. Watered, house, by well; barns and fields, by springs. A large lake and pond only 2 and 3 miles from farm. Unoccupied. Price, \$1,800. Terms, \$500 down and \$50 a month, until \$1,050 is paid. Address Wm. Taylor, owner, Huntersland, N. Y., or M. L. Tator, agent, Middleburgh, N. Y.

No. 18.—Farm of 160 acres; located 2 miles from Medusa P. O., R. F. D. 1; 12 miles from railway station at Cairo;  $\frac{1}{2}$  mile from school; 2 miles from butter factory and Protestant churches. Highways, good, somewhat rolling. Nearest city, Albany, 24 miles distant, population 100,253, reached by auto bus. Surface of farm, rolling. Soil, loam. Acres

in meadow, 35; in natural pasture, 25; in timber, 40; good hemlock and hardwood; acres tillable, 85. Fruit, 200 apple, 20 pear, 20 peach, 20 cherry and 20 plum trees. Best adapted to corn, oats, rye and buckwheat. Fences, stone wall and wire. House, 2 stories, 14 rooms, good condition. Outbuildings: barn, 34x46, 2 stories, with wing, 18x24; barn, 30x40, with wing, 16x30; wagon house and stable, 30x50; hog and hen house. Watered, house, by running water and well; barn, by running water and spring; fields, by brook and springs. This farm is 5 miles from Catskill Mountains and Crystal Lake. Occupied by owner. Reason for selling, owner cannot do the work. Price, \$3,750. Terms, cash. Address W. A. Mackey, owner, Medusa, N. Y., R. D. No. 1, Box 42.

No. 19.—Farm of 166 acres; located 2 miles from Medusa and 5 miles from Greenville P. O., R. D. 1; 12 miles from railway station at Cairo, on Catskill Mountain R. R., and 17 miles from West Coxsackie or Ravena, on West Shore R. R.; 1 mile from school; 1 mile from Methodist church; 2 to 5 miles to churches of other denominations; 2 miles from butter factory. Roads, good. State roads from Greenville to Coxsackie and from Rensselaerville to Albany. Nearest city, Albany, population 100,253, distant 30 miles, reached by highway or rail from West Coxsackie. Surface, rolling. Altitude, 1,000 feet. Soil is good clay loam. 20 acres of meadow; 25 acres of natural pasture; about 35 acres of timber, hemlock, maple, beech, white ash, elm, basswood, etc.; acres tillable, 86. There is an old neglected apple orchard of about 3 acres, Newtown Pippins, also a good many younger apple trees, some of which have been grafted while others need topworking and pruning, also a few pear trees. Land is best adapted to dairying, fruit, and all general farm crops. Fences consist of stone walls and considerable new wire fencing. There is a good 2-story house, 26x36, and extensions, 16x30, with excellent cellar; barn, 30x40, with 30-foot extension, stanchions for 14 head of cattle; barn, 26x60, with 20-foot posts, stalls and carriage room; 2-story grain house, 18x26; 2 poultry-houses, 8x15 and 15x18. Buildings, good condition. House has well and cistern. Barns have wells. Fields have springs, and are also watered by the Eight Mile Creek, running through northwest portion of farm. Catskill Mountains 6 or 8 miles distant,

and Catskill creek 4 or 5 miles to the south. Occupied by tenant. Reason for selling, old age of owner. Price and photograph on application. Terms, cash or half cash, with balance on mortgage at 5%. Only 2 miles to one of the best creameries in the State, saw and grist-mills. Address, Eugene Spalding, owner, Greenville, Greene County, N. Y.

No. 20.—Farm of 160 acres; located 2 miles from Rensselaerville P. O., R. D.; 10½ miles from railway station at Middleburgh, on line of Middleburgh and Schoharie R. R.; ¼ mile from school; 2 miles from churches; 2 miles from butter factory. Highways, good. General surface of farm, rolling, some level. Nature of soil, loam. Acres in timber, 30, beech, maple and hemlock; acres tillable, 130. Fruit, apples, pears and plums. Best adapted to oats, barley, buckwheat, corn, potatoes and rye. Fences, fair, some new, stone and wire. House, 2 family, in good condition. Barns, sufficient for farm, in fair condition. House and barns watered by running water; fields by stream. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms, will take small mortgage. Address Peter W. Weidman, owner, Rensselaerville, N. Y.

No. 21.—Farm of 10 acres; locate 2½ miles from Medusa P. O., R. D. 1; 10 miles from railway station at Cairo, on line of Catskill Mt. R. R.; ¼ mile from school; 2½ miles from butter factory, milk station and Protestant churches. Highways, good. Surface of farm, level. Acres in meadow, 8; in natural pasture, 2; all tillable. Fruit, apples, pears, cherries, plums and currants. Best adapted to hay, potatoes, corn and vegetables. Fences, woven wire and stone wall. House, 2 stories, good condition. Outbuildings: barn, wagon house, stable, hen house, sheds and storage building. Watered, house, by well and cistern; barns, by well; fields, by brook and springs. Occupied by owners. Reason for selling, to close an estate. Price, \$1,000. Terms, prefer cash. Address Roscoe W. De La Mater, owner, Medusa, N. Y., R. F. D. 1.

No. 22.—Farm of 198 acres; located ½ mile from Medusa P. O.; 13 miles from railway station at Cairo, on line of Catskill Mt. R. R.; ¼ mile from school, butter factory and Protestant churches. Highways, good. Nearest city, Albany, population 100,253, 28 miles distant, reached by highway and auto bus. Surface of farm, rolling and level.

Altitude, 900 feet. Soil, loam. Acres in meadow, 15; in natural pasture, 73; in timber, 20, hardwood and hemlock; acres tillable, 90. Fruit, apples. Best adapted to corn, wheat and oats. Fences, wall and wire, fair condition. House, 18 rooms, 2 stories, also tenant house, good condition. Outbuildings: 2 barns, wagon house, grain house, shed, 60 feet long, all in good condition. Watered, house, by spring; barns, by well; fields, by spring and creek. Occupied by owner. Reason for selling, poor health of owner. Price, \$4,500. Terms upon application. Address Austin C. Mackey, owner, Medusa, N. Y.

#### TOWN OF WESTERLO

Population 1,307.

No. 23.—Farm of 90 acres; located 1 mile from South Westerlo P. O., 14 miles from railway station at Ravena, on line of W. S. Railway; 1 mile from school, church and butter factory. Highways in good condition. Surface of farm, rolling. Altitude, 800 feet. Soil, good. Acres in meadow, 65; in natural pasture, 10; in timber, 7, hard and soft; acres tillable, 70. Fruit, peaches, pears, cherries and apples. Best adapted to hay and grain. Fences, stone wall and wire, fair condition. House, 100 feet long, first-class condition. Outbuildings: barn, 40x60; wagon house and hog house; shed and hen house. Watered, house, by well and cistern; barns, by springs; fields, by neverfailing stream. Occupied. Reason for selling, to close an estate. Price, \$2,200. Terms, cash or part down, remainder on mortgage. Address Vernon Whitford, owner, Westerlo, N. Y., Box 72.

No. 24.—Farm of 17 acres; located 4 miles from Greenville P. O., R. D. 1; 15 miles from railway station at Cox-sackie, on line of W. S. R. R.; 50 rods from school and church; 2 miles from butter factory and milk station. Highways, in good condition. This farm is 25 miles from Albany, population 100,253, reached by highway. Surface of farm, rolling. Soil, fairly good. Some chestnut, hickory and maple wood; acres tillable, 11. Fruit, 11 apple and 3 cherry trees; also a large grape arbor. Best adapted to buckwheat, rye, oats, corn and potatoes. Fences, stone wall. Two houses in good condition. Outbuildings: large hen house, pig pen and barn, all in good condition. Watered by well and spring. Occupied by tenant. Reason for selling, ill health of

owner. Price, \$1,000. Address Abbie E. Hale, owner, Greenville, N. Y., Greene county. Owner will rent.

No. 25.—Farm of 150 acres; located on R. F. D. 14 miles from railway station at Ravena on line of W. S. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from butter factory and Protestant churches. Highways, good. Nearest city, Albany, population 100,253, 20 miles distant, reached by State road. Surface of farm, rolling and level. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 124; in natural pasture, 16; in timber, 10; beech, maple, hemlock, good; acres tillable, 124. Fruit, 200 apple, 25 pear trees, also cherries and plums. Best adapted to corn, oats, rye, buckwheat and hay. Fences, woven wire and barbed wire, good. House, 8 rooms,  $1\frac{1}{2}$  stories, woodshed attached. Outbuildings: barn, 24x40; barn, 20x50; barn, 30x60, good condition; also hen house, 12x16, and hog pen, 12x16; good condition. Watered, house, by well; barns, by well and creek; fields, by springs and creeks. Occupied by tenant. Reason for selling, poor health of owner. Price, \$2,200. Terms, easy. Address Fred Winegard, owner, Westerlo, N. Y.

No. 26.—Farm of 185 acres; located 2 miles from South Westerlo, R. D. 1 from Dormansville, 14 miles from railway station at Ravena, on line of W. S. Railway; 1 mile from school and Protestant church; 2 miles from butter factory. Highways, somewhat hilly but good. Nearest city, Albany, population 100,253, 25 miles distant, reached by highway or rail from Ravena. Surface of farm, nearly level, southern exposure. Altitude, about 1,500 feet. Soil, clay sub-soil. Acres in meadow, 100; in natural pasture, 60; in timber, 25, variety, mostly hemlock; all tillable, except woodland. Fruit, apples, pears, grapes, plums, etc. Best adapted to hay, oats, buckwheat and corn. Fences, stone and wire, fair condition. Large house in good condition. Outbuildings: good size barns, new chicken house, with well fenced yards. Watered, house and barn, by running water; fields, by springs. Occupied by tenant. Reason for selling, owner a widow and cannot attend to farm. This is a fine dairy farm. Price, \$4,000. Terms, part cash, remainder on mortgage. Address Emily R. Wickes, owner, South Westerlo, N. Y. Owner will rent for money, on shares or with option to buy.

No. 27.—Farm of 75 acres; located 1 mile from Westerlo P. O., R. D. 1; 15

miles from railway station at Ravena, on line of West Shore R. R.; 1 mile from school and churches; 1 mile from butter factory. Highways, good. Nearest city, Albany, population 100,253, 20 miles distant, reached by State road and rail. General surface, rolling. Altitude, 1,000 feet. Nature of soil, gravel loam. Acres in timber, 20, pine, hemlock and ash; acres tillable, 50. Fruit, 75 apple trees. Best adapted to hay, rye, oats, corn and buckwheat. Fences, stone, fair condition. House, 20x30; wing, 20x30. Outbuildings: barns, 30x40 and 20x30; shed, 16x20; hog house, 12x20. House watered by well and cistern; barns, by well; fields, by creek and springs. Occupied by tenant. Lease expires April 1, 1915. Reason for selling, to close an estate. Price, \$1,800. Terms, \$900 cash. Address B. T. Briggs, administrator, Alcove, N. Y. Owner will rent.

No. 28.—Farm of 128 acres; located 2 miles from Westerlo P. O., R. D. 1; 16 miles from railway station at Ravena, on line of West Shore R. R.; school on farm; 2 miles from churches; 2 miles from cheese factory. Highways, good. Nearest city, Albany, 20 miles distant, population 100,253, reached by rail and State road. General surface, rolling. Altitude, 1,000 feet. Nature of soil, black and clay loam. Acres in meadow, 35; in timber, 12, hemlock, pine and ash; acres tillable, 100. Fruit, about 25 apple trees. Best adapted to rye, oats, corn and hay. Fences, stone, fair condition. House, 20x30,  $1\frac{1}{2}$  stories. Outbuildings: barn, 42x54, 2 floors; barn, 20x60; shed, 16x70. House watered by well; barns, by springs; fields, by creek. Occupied by tenant; lease expires April 1, 1915. Reason for selling, to close an estate. Price, \$3,000. Terms, \$1,000 cash, balance on mortgage. Address B. T. Briggs, administrator, Alcove, N. Y.

No. 29.—Farm of 155 acres; located  $1\frac{1}{2}$  miles from South Berne P. O.; 12 miles from railway station at Voorheesville on line of D. & H. Ry.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from cheese factory;  $1\frac{1}{2}$  miles from condensing plant. Highways, good condition. Nearest village, South Berne, reached by highway. General surface of farm, level and rolling. Altitude, 1,200 feet. Nature of soil, clay and loam. Acres in pasture, 20; in timber, 8; tillable, 140. Small apple orchard. Best adapted to hay, oats, barley, rye, buckwheat, and corn. Fences, rail and stone. House, 8 rooms. Wagon house

and stable. House, barn and fields watered by wells and springs. Occupied by tenant. Reason for selling, old age. Price, \$20 per acre. Terms,  $\frac{1}{2}$  cash. Address John W. Hays, owner, Brookview, N. Y.

No. 30.—Farm of 115 acres; located  $\frac{1}{2}$  mile from South Westerlo P. O., R. D. 1;  $13\frac{1}{2}$  miles from railway station at Ravena, on line of West Shore R. R.;  $\frac{1}{2}$  mile from school and churches. Nearest city, Albany, population 100,253,  $23\frac{1}{2}$  miles distant, reached by highway. Highway, State road. Altitude, 500 feet. General surface, rolling. Acres in meadow, 85; in pasture, 30; in timber, 5, hemlock and hardwood. Acres tillable, 85. Fruit, 50 apple trees, varieties. Best adapted to general farm crops. Fences, wire and stone, good condition. House, new, 8 rooms. Barn, 50 feet long, good condition. House watered by well, barn by well and spring, fields by brook. Occupied by owner. Reason for selling, has other farm. Price, \$3,000. Terms, one-half down, balance on mortgage. Address Louis W. Reynolds, owner, South Westerlo, N. Y.

No. 31.—Farm of 80 acres; located

2 miles from Dormansville P. O., R. D. 1; 13 miles from railway station at Ravena, on line of W. S. R. R.; 1 mile from school; 2 miles from churches, and  $2\frac{1}{2}$  miles from butter factory. Highways, hilly, but good. Nearest city, Albany, population 100,253, 18 miles distant, reached by highway. General surface, mostly level. Altitude, 1,500 feet. Good strong soil, clay subsoil. Acres that can be used as meadow, 10; in natural pasture, 12; in timber, 5, beech, maple, hickory and basswood. Acres tillable, 70. Fruit, 160 apple, 14 pear and some plum trees. Best adapted to hay and grain. Fences, wire and stone wall, fair condition. House, 14 rooms, 28x40; wing, 13x16; ell, 22x30, good condition. Outbuildings, barn, 30x40; shed, 20x40; shed, 20x38; good stables; silo, 12x24; horse barn, 30x50; 2 poultry houses, 18x18 and 14x16, all in good condition. House watered by well, barns by well, fields by springs. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Will sell stock, tools and machinery if desired. Address E. J. Hunt, owner, Dormansville, N. Y.

#### ALLEGANY COUNTY

Area, 1,047 square miles. Population, 41,412. Annual precipitation, 42.4 inches. Annual mean temperature,  $47.5^{\circ}$ . Number of farms, 4,937. Average value of farm lands per acre, \$37.32. County seat, Belmont.

Located in what is known as the southern tier of counties west of the center of the state.

The surface features are rough and mountainous. The county is traversed by deep valleys the sides of which are, in many places, too steep for cultivation. Some of the elevations are from 500 to 800 feet above the valleys and from 2,000 to 2,500 above tide water. The Genesee river flows northwest and a little to the west of the center of the county, and many of the tributaries of this river have cut deep valleys in different directions.

The soil of the county is known as a volusia soil. These soils are derived through feeble glaciation and consist of a gray, light brown or pale yellow silt loam. The volusia loam is the most important agricultural soil of the volusia series. The soil upon the upland is generally a heavy clay. This soil is excellently adapted to grazing, and whenever found dairying can be profitably engaged in. It is good soil for grains and general farming. Notwithstanding the roughness of the surface features, Allegany county contains many excellent farms and farm lands.

The lines of communication necessarily follow the valleys and pass in crooked lines throughout the county. There are more than fifteen hundred miles of graded and improved highways. There are many villages in the county but no large cities. The excellent school advantages are shown by the 245 district schools and Alfred University. This university, located at Alfred, offers a four-year course in agriculture.

Some of the leading crops of the county are as follows: Corn, 94,126 bushels; oats, 935,955 bushels; wheat, 28,147, bushels; barley, 39,000 bushels; buckwheat, 170,620 bushels; rye, 6,385 bushels; potatoes, 1,631,123 bushels; hay and forage, 175,297 tons. The county ranks fifth in the production of potatoes and fourth in the number of farms. There are twenty-two agricultural societies for the purpose of promoting agricultural interests and improvement of rural life.

The dairy interest is shown in the 39,573 milch cows found on the farms of the county. The other live-stock being horses, 13,542; swine, 14,062; sheep, 24,320; poultry, 187,579. The total value of all farm property is \$26,071,862, a small increase over that of 1900, namely, \$1.21 per acre.

TOWN OF ALFRED

Population 1,590.

No. 32.—Farm of 83 acres; located  $1\frac{1}{2}$  miles from Alfred P. O. and railway station, on line of Erie R. R.;  $1\frac{1}{2}$  miles from school and churches; 6 miles from butter factory;  $1\frac{1}{4}$  miles from cheese factory and  $2\frac{1}{2}$  miles from milk station. Highways, good. Nearest city, Hornell, population, 13,617,  $\frac{1}{2}$  mile distant, reached by rail or highway. General surface, level and part hilly. Altitude, 2,000 feet. Nature of soil, hard pan. Acres that can be used as meadow, 35; in natural pasture, 30; in timber, 15, maple, beech and ash. Acres tillable, 45. Fruit, 50 apple, 3 plum, 2 cherry, 12 pear, 1 quince tree and some raspberries. Best adapted to hay, oats, buckwheat and potatoes. Fences, wire, rail and board, not very good. House, large, good condition. Outbuildings, 2 good barns, granary, not very good; 2 poultry houses, one good and the other needs new roof. House watered by well in cellar, barns by well, fields by spring. Occupied by owner. Reason for selling, old age. Price, \$3,500. Terms, \$2,000 cash, balance on mortgage. One mile from State School of Agriculture, Alfred, N. Y. Address Mrs. Charles Vincent, owner, Alfred, N. Y.

No. 33.—Farm of 48 acres; located 1 mile from Alfred P. O., R. D.;  $1\frac{1}{2}$  miles from railway station at Alfred, on line of Erie R. R.; 1 mile from school and churches;  $1\frac{1}{2}$  miles from butter factory;  $\frac{1}{2}$  mile from milk station. Nearest city, Hornell, population 13,617, 9 miles distant, reached by rail or highway. General surface, sloping. Acres that can be used as meadow, 20; in pasture, 15; in timber, 8, maple, beech and basswood. Acres tillable, 25. Fruit, 25 apple trees, varieties. Best adapted to grain, fruit, potatoes and vegetables. Fences, mostly wire, in good condition. House, old, poor condition. Outbuildings, fair condition. House and barns watered by wells, fields by springs. Unoccupied. Reason for selling, owner in other business. Price, \$1,500. Terms, part down, balance on mortgage. Address C. A. Vincent, owner, Alfred Station, N. Y.

TOWN OF ALLEN

Population 598.

No. 34.—Farm of 333 acres; located 3 miles from Angelica P. O., R. D. 1, and railway station, on line of P. S. & N. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{4}$  mile from cheese factory; 2 miles from Lutheran church; 3 miles from Methodist, Baptist and Catholic churches; 3 miles from milk condensing plant. Highways, somewhat hilly but good. Surface of farm, rolling. Soil, some gravel. Acres in meadow, 100; in natural pasture, 100; in timber, 83, hard. Acres tillable, 150. Best adapted to oats, barley, spring wheat and potatoes. Fences, wire and rail. House, 11 rooms, fair condition. Outbuildings, new barn, 30x46, with basement; old barn, 32x44. Watered by well, springs and creek. Occupied by owner. Reason for selling, ill health of owner. Price, \$20 per acre. Terms, will give time on \$4,000. Address Henry C. Gallmann, owner, Angelica, N. Y., R. F. D. 1.

No. 35.—Farm of 227 acres; located 3 miles from Fillmore P. O. and railway station, on line of Pennsylvania R. R.; 3 miles from high school; district school on farm; 3 miles from butter factory; 3 miles from cheese factory; 3 miles from milk station, milk collected at door. Highways, good. General surface, rolling and hilly. Nature of soil, gravel, clay subsoil. Acres that can be used as meadow, 100; in natural pasture, 87; in timber 16, 10 acres of virgin, mostly hemlock. Acres tillable, 140. Fruit, 50 apple trees, small fruit for home use. Best adapted to potatoes, grain and dairying. Fences, wire. House, 2 stories, 8 rooms, good condition. Outbuildings, main gambrel roof barn, 32x70 with ell same size, 21 stanchions; 2 round silos; granary; sheep shed, tool shed, hog and poultry house. House watered by well, barns by spring and fields by creek. Occupied by owner. Reason for selling, other business. Price, \$5,800. Terms, \$2,000 cash, balance on mortgage at 5 per cent. Tenant house and  $1\frac{1}{4}$  acres of land can be bought for \$400 extra. Address Charles E. Myers, owner, Fillmore, N. Y., or address Fred Daniels, broker, Houghton, N. Y.

## TOWN OF AMITY

Population 2,071.

No. 36.—Farm of 400 acres; located 4 miles from Belmont P. O., R. D. 3, and railway station, on line of Erie R. R.;  $\frac{3}{4}$  mile from school; 4 miles from butter factory, milk station and milk condensing plant;  $\frac{1}{2}$  mile from cheese factory. Highways, good. Nearest large village, Wellsville, population, 4,382, 9 miles distant, reached by rail and highway. Surface of farm, level and rolling. Soil, black loam. Acres in meadow, 300; in natural pasture, 40; in timber 25, beech, maple and chestnut. Acres tillable, 335. Fruit, apples, pears, plums and cherries. Best adapted to hay and grain. Fences, woven wire and rail. Two good houses, one of 12 rooms and one of 8 rooms. Outbuildings, barn, 28x40; basement barn, 30x80; horse barn, granary and hog house. Watered by springs and creeks. Occupied by owner. Reason for selling, ill health and advanced age of owner. Price, \$10,000. Terms, \$2,000 down, balance on time. Address H. S. Corbin; owner, Belmont, N. Y. Owner will rent.

## TOWN OF ANGELICA

Population 1,688

No. 37.—Farm of 250 acres; located 2 miles from Angelica P. O.; 2 miles from railway station at Angelica, on line of P. S. & N. R. R.; 2 miles from school, Protestant churches, butter factory and cheese factory; 3 miles from milk station and milk condensing plant. Highways, good. Surface of farm, rolling. Altitude, 1,300 feet. Soil, black and yellow loam. Acres in meadow, 200; in natural pasture, 50; in timber, 10, hemlock, maple, beech and elm. Acres tillable, 220. Fruit, apples, pears and plums, enough for home use. Adapted to all grains. Fences, wire, good. Large house, 2 tenant houses. Outbuildings, barn, 32x110; barn, 28x35; horse barn, 26x30; shed, 24x40; hen house and barn, 35x42. Watered, running water in house and barn; fields by creek. The Genesee river is  $\frac{1}{4}$  mile from farm. Reason for selling, owner has other interests. Price, \$15,000. Terms, reasonable. Address William Herdman, owner, Angelica, N. Y.

No. 38.—Farm of 120 acres; located 1 mile from Angelica P. O. and railway station, on line of P. S. & N. R. R.; 1 mile from school; 1 mile from churches; 1 mile from butter factory; 1 mile from milk station and condensing plant.

Highways, good. General surface, level and rolling. Altitude, 1,500 feet. Nature of soil, clay and black loam. Acres that can be used as meadow, 90; in natural pasture, 10; in timber, 20, beech, maple and hemlock. Acres tillable, 100. Fruit, apple, pear, cherry and plum trees. Best adapted to corn, potatoes, hay, oats, barley and wheat. Fences, wire, in excellent condition. Ten room house, nearly new. Outbuildings, barn, 30x44, and one 30x50. House watered by well, barns by springs and fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$10,000. Terms, \$4,000 cash, balance on mortgage. Price includes 10 good cows, one bull, 3 horses and complete set of farming tools. Address Michael Meehan, Angelica, N. Y., owner, or Angelica Real Estate Agency, brokers, Angelica, N. Y.

## TOWN OF BIRDSALL

Population 568

No. 39.—Farm of 232 $\frac{1}{2}$  acres; located 5 miles from Almond P. O.; 3 $\frac{1}{4}$  miles from railway station at Bennett's, on line of P. S. & N. R. R.; school on farm; 1 mile from church; 3 $\frac{1}{2}$  miles from butter factory; 1 mile from cheese factory; 3 $\frac{1}{2}$  miles from milk station. Highways, rough. Nearest city, Hornell, population 13,617, 12 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 40; in natural pasture, 65; timber enough for home use. Acres tillable, 150. Best adapted to dairying and general farming. Fences, mostly wire, fair condition. House, very good, 2 story, 14 rooms. Outbuildings, nearly new barn, 30x96, with ell, 16x30, gambrel roof; square silo, 17x26. House watered by well, barns by well and fields by springs. Occupied by owner. Price, \$4,650. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Fred Karr, owner, Almond, N. Y., or Fred Daniels, broker, Houghton, N. Y.

## TOWN OF CENTERVILLE

Population 781

No. 40.—Farm of 209 acres; located 1 mile from Centerville P. O.; 2 miles from railway station at Centerville, on line of B. & S. R. R.; 1 mile from school, Protestant churches, butter and cheese factory; 2 miles from milk station. Highways, in fair condition, part rough. Nearest city, Buffalo, 53 miles distant, reached by rail. Surface of farm, roll-

ing. Soil, gravel, with clay subsoil. Acres in meadow, 100; in natural pasture, 60; in timber, 40, maple. Acres tillable, 130. Fruit, apples. Best adapted to hay, corn and oats. Fences, wire, fair condition. House, 36x40, good condition. Outbuildings, barn, 30x70; barn, 32x60, good condition. Watered by well and creek. Occupied by tenant. Reason for selling, ill health of owner. Price, \$5,000. Terms will be given on application. Address T. M. Lawrence, owner, Centerville, N. Y. Owner will rent.

## TOWN OF GROVE

Population 740

No. 41.—Farm of 250 acres; situated 3 miles from Swain P. O., and railway station, on line of Erie R. R. Highways, fair. Acres in meadow, 100; balance tillable; acres natural pasture, 90. 1 mile from cheese factory and school; 2 miles from church. Some second growth timber. Fruit, 2 small orchards of apples and pears. Best adapted to hay, barley, oats, potatoes and buckwheat. Occupied. Fences, wire and rail, in good condition. House, 18x28, 2 stories; wing, 18x18, nearly new. Barns, 30x102, and 24x66. This farm would make a good stock farm. Watered, house by well, barns by cistern, fields by springs. Price, \$7,000. Terms,  $\frac{1}{4}$  down; balance to suit buyer. Reasons for selling, owner blind and not able to care for the farm. Name and address of owner, Geo. W. Carter, Nunda, Livingston Co., N. Y. Owner will rent with option to buy.

No. 42.—Farm of 250 acres, located miles from Swain P. O.; 4 miles from railway station at Dalton, on line of Erie R. R.; 1 mile from school and cheese factory; 2 miles from Methodist church. Highways, in fair condition. Surface of farm, nearly level. Soil, loam. Acres in meadow, about 100; in natural pasture, 40; in timber, 40, second growth. Acres tillable, 160. Fruit, two small apple orchards. Best adapted to hay, oats, barley, beans, buckwheat and corn. Fences, mostly wire. House, 18x28, 2 stories. Outbuildings, 2 barns and chicken house. Watered, house, by well; barns, by cistern; fields by springs. Occupied by owner. Reason for selling, ill health of owner. Price, \$7,000. Terms, \$2,000 down, balance on long time at 5%. Address George W. Carter owner, Nunda, N. Y.

No. 43.—Farm of 164 acres; located 2 miles from Whitney's Crossing P. O. R. D. No. 1; 2 miles from railway sta-

tion at Garwoods on line of Erie R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches;  $1\frac{1}{2}$  miles from cheese factory; 2 miles from milk station. Nearest village, Canaseraga, population 754, 4 miles distant, reached by rail and highway. General surface, hilly, rolling and level. Altitude, 1,663 feet. Nature of soil, clay and gravel loam. Acres in meadow, 80; in pasture, 40; in timber, 40; maple and beech. Acres tillable, 100. Fruit, variety. Best adapted to hay, oats, wheat, corn and potatoes. Fences, wire. House, new; 7 rooms. Outbuildings, barn, 28x64; barn, 30x40; barn, 18x40; barn, 20x30; all in fair condition. House watered by well, barns and fields, by creek. Possession given at any time. Price, \$17.00 per acre. Terms, half cash, balance at 5%. 2 oil wells drilled on farm; oil found in paying quantities. Address, Frank E. Harmon, owner, Whitney's Crossing, N. Y.

No. 44.—Farm of 103 acres; located 2 miles from Swain P. O., R. D. and railway station, on line of Erie R. R.; 1 mile from school; 2 miles from churches; 2 miles from butter and cheese factory. General surface, rolling. Altitude 1,600 feet. Nature of soil, loam. Acres in meadow, 90; in timber, 10, maple and beech. Acres tillable, 90. Fruit, 75 apple, 8 cherry and pear trees. Best adapted to general farming. Fences, fair. House, fair condition. Outbuildings, fair condition. House, barns and fields watered by well. Occupied by owner. Reason for selling, ill health. Price, \$1,600. Terms reasonable. Address O. A. Patterson, owner, Swain, N. Y. Owner will rent.

## TOWN OF HUME

Population 1,736

No. 45.—Farm of 175 acres; located 1 mile from Hume P. O., R. D., and 2 miles from railway station at Fillmore, on line of Pennsylvania R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from milk station and 2 miles from condensing plant. Highways, good. General surface, rolling and level. Altitude, 1,300 feet. Nature of soil, loam. Acres that can be used as meadow, 85; in natural pasture, 75; in timber, 25, hemlock, oak and chestnut. Acres tillable, 75. Fruit, 80 apple trees. Best adapted to grain, beans, potatoes and hay. Fences, good, woven wire and barbed wire.

House, 18x24; wing, 18x20; good condition; bath room. Outbuildings, hay and dairy barn, 30x80, sheds attached; hog house, poultry house, 12x18 and granary, 16x18. Occupied by owner. Reason for selling, wishes to retire. Price, \$30 per acre. Terms, \$3,250 cash, mortgage \$2,000, due August 1, 1915, or could have longer time. Address, M. J. Marville, owner, Fillmore, N. Y.

No. 46.—Farm of 258 acres; located 2½ miles from Fillmore P. O.; 1¾ miles from railway station at Rossburg, on line of Pennsylvania R. R.; 1 mile from school; 2½ miles from churches; 2½ miles from high school; 2½ miles from butter factory; 2½ miles from cheese factory, and 1¾ miles from milk station. Highways, good. General surface, rolling and hilly. Nature of soil, gravel, clay and black loam. Acres that can be used as meadow, 60; in natural pasture, 80; in timber, 60; second growth. Acres tillable, 150. Fruit, 100 apple trees, small fruit for home use. Best adapted to grain, potatoes, corn and dairying. Fences, fair condition. House, 14 rooms with bath and steam heat. Outbuildings, main barn with gambrel roof, 38x50, with basement; barn, 34x40; barn, 30x38; barn, 30x50, and round silo. House watered by well and windmill, barns by spring, and fields by spring. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms, \$2,000 cash, balance on mortgage at 5%. Address S. J. Hall, owner, Fillmore, N. Y., or Fred Daniels, Broker, Houghton, N. Y.

#### TOWN OF WELLSVILLE

Population 5,663

No. 47.—Farm of 15¼ acres; located 1¼ miles from P. O. at Wellsville, R. D. 2, 1½ miles from railway station at Wellsville, on line of Erie and Buffalo R. R.; 50 rods from school; 1¼ miles from Protestant and Catholic churches; 1¼ miles from cheese factory and milk station; 7 miles from milk condensing plant. Highways, State road. Surface of farm, level. Altitude, 2,000 feet. Soil, loam with clay subsoil. Acres tillable, 14. Best adapted to hay, oats, potatoes and garden truck. Fences, wire, fair condition. House, 8 rooms, cellar under whole house, painted, new. Outbuildings, barn, 24x30, with stable 16x24 and shed 14x37 attached; hen house, hog house and ice house, good condition. Watered by never-failing well and creek. Occu-

ped by owner. Reason for selling, owner wants to buy a larger farm. Price, \$3,000. Terms, prefer cash, but would take ¼ cash, balance on time at 6%. Address Bert Sherwood, owner, Wellsville, N. Y.

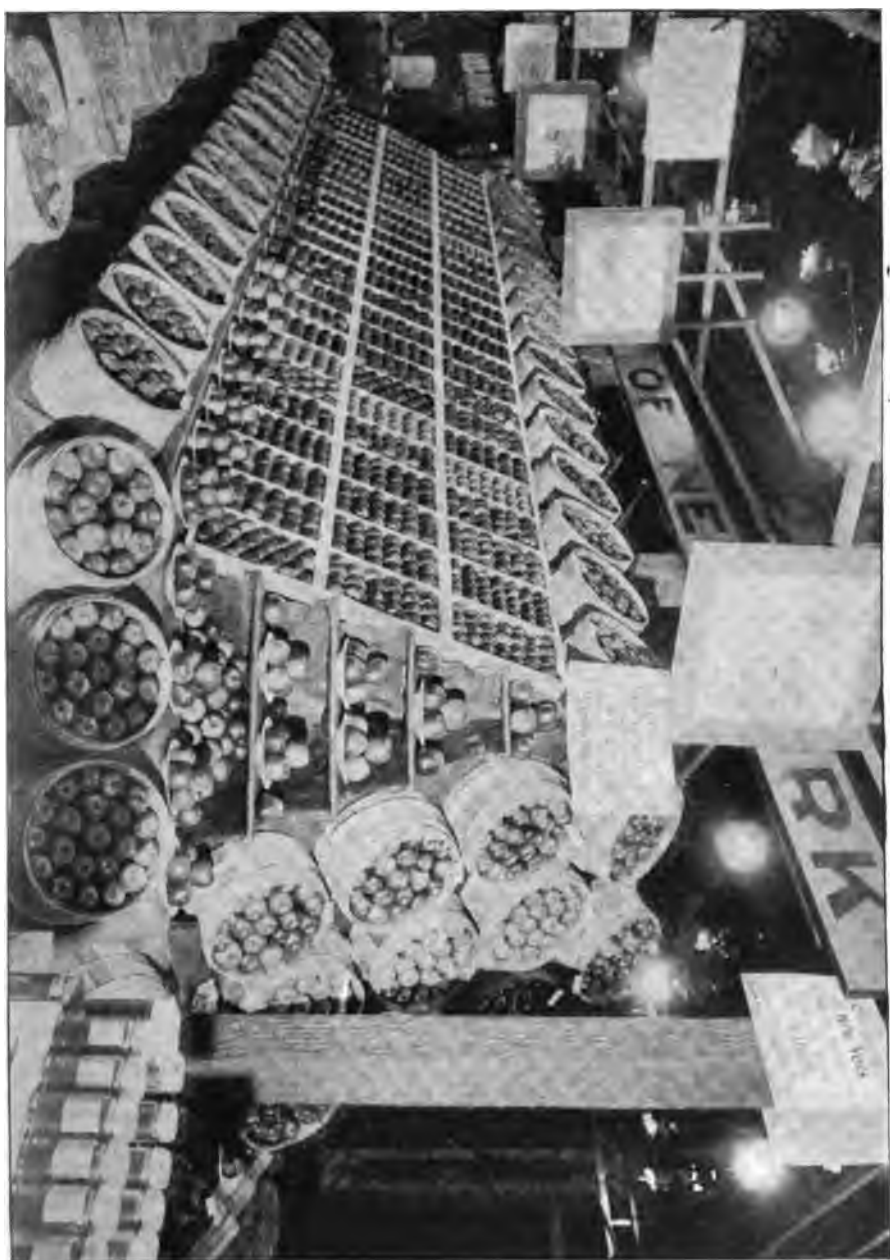
#### TOWN OF WEST ALMOND

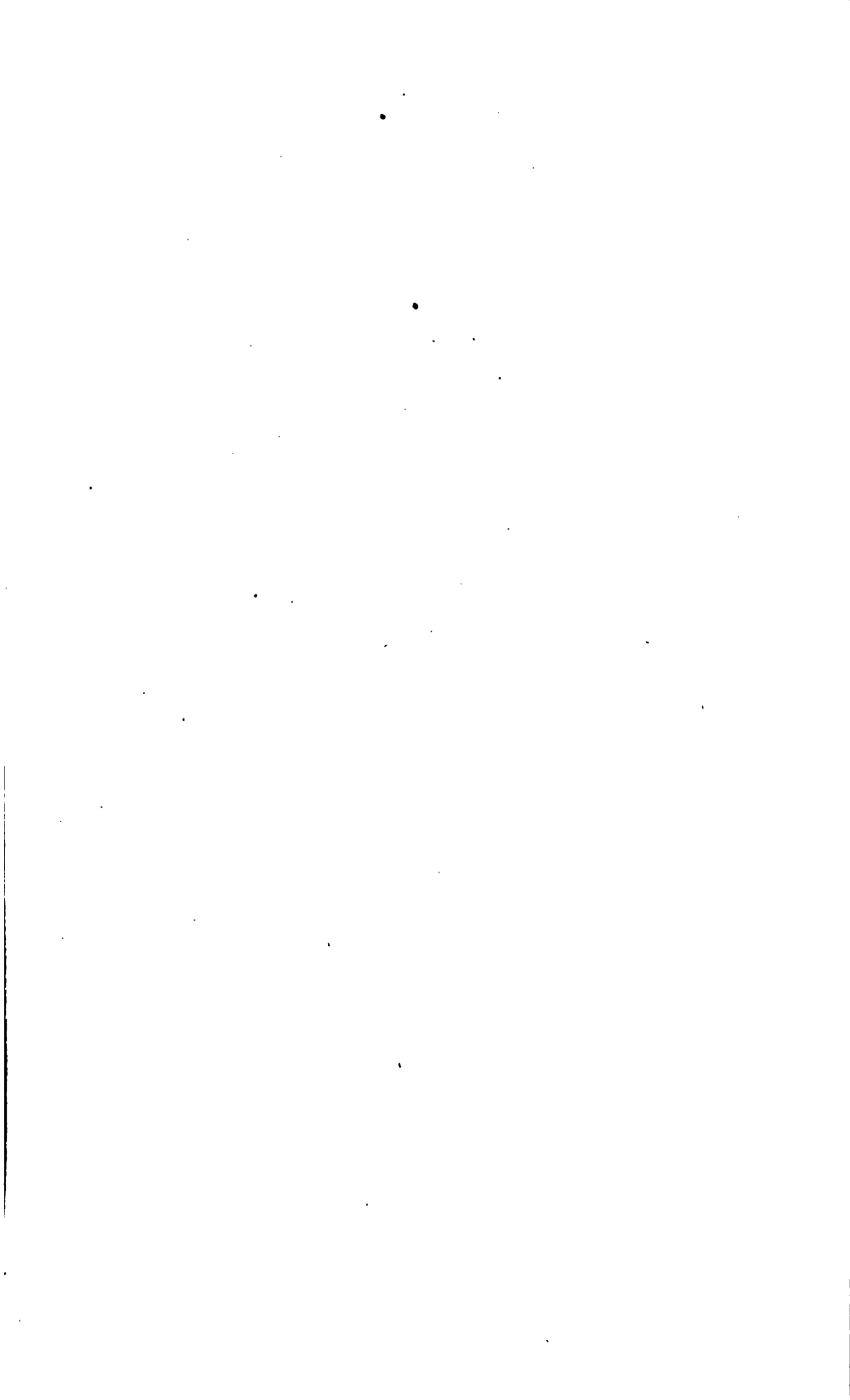
Population 458

No. 48.—Farm of 182 acres; located 6½ miles from Angelica P. O. and 2 miles from railway station at Bennetts, on line of P. S. & N. R. R.; 1 mile from school; 3 miles from cheese factory and 2 miles from milk station. Highways, rough. Nearest village, Angelica, population, 1,056, 6½ miles distant reached by highway. General surface, rolling. Nature of soil, gravel and clay. Acres in meadow, 50; in natural pasture, 75; in timber, 30; acres tillable, 75. Fruit, 75 apple trees. Best adapted to oats, potatoes, barley, buckwheat, etc. Well fenced. 12 room house, 2 stories, bath, cistern, in good condition. Outbuildings: 5 barns, gambrel roof, 30x40, 32x30, 30x30, 25x30 and 30x40 on basement, poultry house, hog house and granary. House and barns watered by well; fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$4,550. Terms, \$1,550 cash, balance on mortgage. Address L. Hadsell, owner, R. D. Angelica, N. Y., or Garfield Real Estate Co., Brokers, Rochester, N. Y.

No. 49.—Farm of 185 acres; located 7 miles from Angelica P. O., 2½ miles from railway station at Bennetts, on line of P. S. & N. R. R.; 1 mile from school; 2½ miles from butter factory; 2 miles from cheese factory and 2½ miles from milk station. Highways, rough. Nearest city, Hornell, population, 13,617, 12 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, gravel and clay loam. Acres that can be used as meadow, 65; in natural pasture, 70; in timber, 5, second growth. Acres tillable, 120. Fruit, variety for home use. Best adapted to general farming and dairying. Fences, wire, fair condition. House, extra good, 14 rooms, bath, hot and cold water. Outbuildings: Gambrel roof barn, 32x57; horse barn, 24x30; barn, 24x40; 3 other barns beside poultry, hog and tool houses. House watered by spring piped to house; barns by spring; fields by spring. Occupied by owner. Reason for selling, wishes to retire. Price, \$4,600.

NEW YORK STATE FRUIT EXHIBIT, CHICAGO LAND SHOW, 1913.





Terms, \$1,600 cash, balance on mortgage at 5%. Address Ray Arnold, owner, Angelica, N. Y., or Fred Daniels, broker, Houghton, N. Y.

No. 50.—Farm of 101 acres; located 4 miles from Almond P. O. and railway station at Bennetts, on line of P. S. & N. R. R.;  $1\frac{1}{4}$  miles from school; 3 miles from churches; 4 miles from butter factory,  $1\frac{1}{2}$  miles from cheese factory and 4 miles from milk station. Highways, rough. Nearest city, Hornell, population, 13,617, 12 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 45; in natural pasture, 15; in timber, 10, mostly second growth. Acres tillable, 90. Fruit, 50 apple trees. Best adapted to dairying and general farming. Fences, mostly wire, good condition. House, 9 rooms, fair condition. Outbuildings, basement barn, 30x40; horse barn, 24x60; square silo, House watered by springs, barns by springs and fields by springs. Occupied by owner. Price, \$2,500. Terms, \$1,000 cash, balance on mortgage at 5%. Address, Deloss Paige, owner, Almond, N. Y., or Fred Daniels, broker, Houghton, N. Y.

No. 51.—Farm of 93 acres; located,  $6\frac{1}{2}$  miles from Angelica P. O.; 2 miles from railway station at Bennett's, on line of P. S. & N. R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from butter factory; 2 miles from cheese factory and milk station. Highways, rough. Nearest city, Hornell, population 13,617, 12 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, gravel and clay loam. Acres that can be used as meadow, 33; in natural pasture, 15; in timber, 10. Acres tillable, 80. Fruit, 35 apple trees; variety of small fruit for home use. Best adapted to general crops and dairying. Fences, wire, good condition. House, 2 stories, 8 rooms. Outbuildings, main barn, 30x36; horse barn, 24x40; several buildings. House watered by springs, barns by springs and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,500. Terms, \$1,000 cash, balance on mortgage at 5%. Address Sherman Weaver, owner, Angelica, N. Y., or Fred Daniels, broker, Houghton, N. Y.

No. 52.—Farm of 225 acres; located, 5 miles from Almond P. O.; 2 miles from railway station at Bennett's on line of P. S. & N. R. R.;  $\frac{3}{4}$  mile from school; 3 miles from churches; 2 miles from butter factory; 2 miles from milk station and cheese factory. Highways, rough. Nearest city, Hornell, population 13,617, 12 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 60; in natural pasture, 36; in timber, 40, mostly second growth. Acres tillable, 150. Fruit, 70 apple trees; a variety of small fruit for home use. Best adapted to dairying and general farming. Fences, mostly wire, good condition. House,  $1\frac{1}{2}$  stories, 10 rooms, fair condition; also tenant house of 8 rooms. Outbuildings, extra good gambrel roof barn, 40x70, with basement barn, 26x36; round silo, 12x32; small buildings. House watered by well, barns by springs and fields by springs. Occupied by owner. Price, \$5,500. Terms, easy. Address, W. C. Adams, owner, Almond, N. Y., or Fred Daniels, broker, Houghton, N. Y.

No. 53.—Farm of 220 acres; located, 7 miles from Angelica P. O.; 2 miles from railway station at Bennett's, on line of P. S. & N. R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from butter factory; 2 miles from cheese factory and milk station. Highways, rough. Nearest city, Hornell, population 13,617, 12 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravel and clay loam. Acres that can be used as meadow, 75; in natural pasture, 70; in timber, 15, beech and maple. Best adapted to potatoes, grain and dairy farming. Fences, good, mostly wire. House, 2 stories, 11 rooms, in good condition, with veranda. Outbuildings, main barn with gambrel roof, 30x60, in good condition; horse barn, 24x30; square silo; 3 other barns, beside hog pen and tool shed. House watered by springs, barns by springs and fields by springs. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$5,000. Terms, \$2,000 cash, balance on mortgage at 5%. Address, Lewis Marvin, owner, Angelica, N. Y., or Fred Daniels, broker, Houghton, N. Y.

## BROOME COUNTY

Area, 609 square miles. Population, 78,809. Annual precipitation, 38.27 inches. Annual mean temperature, 48.6°. Number of farms, 4,017. Average value of farm lands per acre, \$31, an increase of 9.8 per cent. since 1900. County seat, Binghamton.

Located in what is known as the southern tier of counties bordering on the Pennsylvania line.

The surface of the county is diversified with rolling uplands, broad intervals and narrow valleys. Altitude of the hill ranges vary from 300 to 600 feet above the valley and 1,200 to 1,500 above tide water. Generally these hills are rounded and arable. Along the rivers, namely: Susquehanna, Chemung and Tioughnioga, the soil is exceptionally fertile, while the higher and hilly portions afford fine grazing and are well adapted for dairying, stock raising, and for fruit, especially apples, which are raised with great success wherever orchards are properly cared for. The value of all farm property is \$16,638,994. The total number of cattle is, dairy cows, 45,620; horses, 8,762; sheep, 9,600; poultry, 184,377. The production of principal crops was corn, 85,215 bushels; oats, 278,170 bushels; buckwheat, 154,982 bushels; potatoes, 708,114 bushels; hay and forage, 113,789 tons. Butter, wool and meat are well represented in the line of products. The production of milk was 16,069,529 gallons. Total receipts from the sale of dairy products, \$1,561,745. The lines of communication through this county afford excellent transportation facilities at low rates for ample market. There are no large tracts of timber, but most farms are well supplied with wood. Ponds, wells, springs and streams give abundant supply of excellent water. There are 207 district schools, a Pomona grange and ten subordinate granges, a cow testing association, poultry association, county agricultural societies, county fire relief association, which with the Binghamton Industrial Exposition, furnish educational advantages above the ordinary. There are 48 milk stations and factories in this county.

Transportation facilities are afforded by the Delaware, Lackawanna & Western, the Erie and the Delaware & Hudson railways, which traverse the county.

## TOWN OF COLESVILLE

Population 2,415

No. 54.—Farm of 181 acres; located  $3\frac{1}{2}$  miles from Harpursville P. O., R. D. 2;  $3\frac{1}{2}$  miles from railway station at Harpursville, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from Methodist church;  $3\frac{1}{2}$  miles from butter factory;  $3\frac{1}{2}$  miles from condensing plant. Highway, some hills, but generally good. Nearest city, Binghamton, population 48,443, 12 miles distant, reached by rail or highway. Surface of farm, mostly level. Soil, mostly red loam. Acres in meadow, 56; in natural pasture, 60; in timber, 30, chestnut, pine, red and white oak, birch and maple; acres tillable, 151. Fruit, 50 apple, 1 pear, 6 plum and 1 cherry tree, large grape-vine. Adapted to all crops grown in this climate. Fences, wire and rail, in good condition. House, 12 rooms, water in house, in fine condition. Cow and hay barn; silo; horse and carriage house; large new milk house; hog, hen and large wood house; ice house; large granary; smoke house. Watered, house, by spring and well;

barns, by spring; water piped to milk house; fields, by springs; 6 miles from Chenango River; 3 miles from Susquehanna River; 10 miles from Afton Lake. Would sell stock and tools with the place. Farm will keep 25 cows. Occupied by owner. Reason for selling, owner wishes to go into other business. Price, \$4,500. Terms, cash, or \$1,000 cash, balance on time. Address Cafferty Bros., owners, Harpursville, N. Y., R. D. 2.

No. 55.—Farm of 123 acres; located 5 miles from Harpursville P. O., R. D. 2, and railway station, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{3}{4}$  mile from church; 3 miles from butter factory; 5 miles from milk station and condensing plant. Nearest city, Binghamton, population 48,443, 12 miles distant, reached by rail or good dirt road. General surface, 60 acres, level valley, balance sloping. Altitude, 700 feet. Nature of soil, clay loam. Acres in meadow, 70; in pasture, 30; in timber, 15, beech, birch and maple; acres tillable, 100. Fruit for home use. Best adapted to potatoes, oats, buckwheat.

corn and rye. Fences, rail and wire, poor condition. House, 8 rooms, 2 stories, poor condition; 2 barns joining, 25x30, 30x40, poor condition. House watered by well; barns and fields, by brook. Unoccupied. Reason for selling, owner non-resident. Price, \$1,200. Terms, half cash, balance to suit purchaser. Address Mary Whitney, owner, Brooklyn, N. Y., or Volney K. Soule, broker, Exchange Bldg., Binghamton, N. Y.

No. 56.—Farm of 110 acres; located 3 miles from Sanitaria Springs P. O. and railway station, on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches; milk collected at the door. Highways, hilly but good. Nearest city, Binghamton, population 48,443, 13 miles distant, reached by rail or highway. General surface, sloping. Altitude, 950 feet. Nature of soil, loam, very productive. Acres that can be used as meadow, 55; in natural pasture, 35; in timber, 20. Fruit, plenty for family use. Best adapted to hay, potatoes, oats, buckwheat and corn. Fences, good repair. House,  $1\frac{1}{2}$  stories, 10 rooms, painted, old fashioned but in good condition. Outbuildings: cow barn, horse barn, granary, poultry house, buildings need shingling, otherwise in good condition. House watered by running spring; barns, same; fields, by springs. Occupied by owner. Reason for selling, other business. Price, \$1,600. Terms, \$800 cash, balance on mortgage. Address Fred Hastings, owner, R. D., Harpursville, N. Y., or Darwin H. Craig, broker, Afton, N. Y.

No. 57.—Farm of 152 acres; located 4 miles from Harpursville P. O., R. F. D.; 3 miles from railway station at Harpursville, on line of D. & H. railway; 1 mile from school; near churches; 3 miles from milk station. Highways, level road almost all the way. Nearest city, Binghamton, population 48,443, reached by rail, 22 miles distant. General surface, level. Altitude, about 900 feet. Nature of soil, good loam; 20 acres tillable. Fruit, 100 apple trees. Best adapted to potatoes, oats, buckwheat and corn. House,  $1\frac{1}{2}$  story, 11 rooms, rock bottom cellar. Outbuildings: cow barn, 30x60; horse barn and corn house; \$200 will put buildings in first class shape. House watered by well; running water near barn and fields by spring. Susquehanna River about 4 miles away. Unoccupied. Reason for selling, owner has moved to another state to look after

business interests there. Price, \$2,700. Terms, \$1,000 down, balance, easy terms. Address H. W. Wedge, owner, 229 Maple St., Jersey Shore, Pa., or Darwin H. Craig, Afton, N. Y.

No. 58.—Farm of 247 acres; 1 mile from Harpursville P. O., R. D. 2; 2 miles from station on D. & H. R. R.; 20 rods from school; 3 miles from Presbyterian church; 1 mile from the Episcopal, Baptist and Methodist; 2 miles from Sheffield Farms, Slawson & Decker plant and Borden's shipping plant; 1 mile from State road. Nature of highways, slightly hilly, but good. Nearest city, Binghamton, population 48,443, 23 miles distant by rail or 16 by highway. General surface, rolling. Meadows, large and smooth. Nature of soil, mellow and productive. Acres in meadow, 100; pasture, 90; timber, 60, thrifty chestnut, oak, beech, birch, maple, pine and hemlock; acres tillable, 150. Fruit, grapes, plums, 3 small apple orchards. Best adapted to potatoes, corn, grain, hay, general dairying and farming. Fences, rail, wire, all in good condition. New house, 30x32, and wing, 12x24, 12 rooms; also an old house ceiled with old hill pine. Barns and outbuildings, barn, 50x72, basement under all,  $\frac{1}{2}$  concrete floor; horse and wagon barn, 24x50; barn, 24x36; milk and ice house, 24x30; building, 20x36; hog pens with concrete floor in basement, hen house and tool house on next floor and granary on third floor. Watered, house, by fine well; barns by running water; fields by large, living springs. Susquehanna River in sight, 1 mile distant. Beautiful view of 10 miles to the south, east and north-east. Occupied by owner. Good stone quarry on place. This farm cuts on an average of 75 tons of hay. Will winter 40 head of cattle and the teams; will summer 30 head. Possession in 60 days. Reason for selling, owner is single man. Price, \$10,000. Terms,  $\frac{1}{4}$  down. This price includes 40 head of cattle, tools and crops, 10 horses and colts. Address Ray B. Hurd, owner, Harpursville, N. Y., R. D. 2.

No. 59.—Farm of 100 acres;  $\frac{1}{4}$  mile from Belden P. O., R. D., and railway station, on line of D. & H. R. R.; 2 miles from Tunnel station; 2 miles from school and churches;  $1\frac{1}{2}$  miles from cheese factory; 2 miles from milk station and bottling plant. Nature of highways, hilly to Tunnel, 2 miles; level and good to Harpursville, 4 miles; nearest city, Binghamton, population 48,443,

distant 16 miles by highway and 20 by railway. General features of farm, nearly level. Can see it all from doorway. Nature and quality of soil, clay loam, new, never has been plowed very much. Acres in meadow, 40; natural pasture, 55 (white clover); timber, 6, pine and hemlock, thrifty. Acres tillable, 100. Fruit, 25 apple trees, mostly Northern Spies. Best adapted to grain, hay, potatoes, corn, etc. Fences, wire, in good condition. House, 6 rooms, and woodshed; in good condition. Barns, 30x36, with basement, new; 28x36, with linter stables, 14x36, recently repaired. Hog pen and hen house, 16x20; milk house. Watered, house by well, barns and fields by creek and spring. Susquehanna River 4 miles distant. Occupied by tenant. The buildings would cost what is asked for the farm. The farm is carrying 10 dairy cows and team. The meadows need cultivating and re-seeding; land has not been plowed until recently. Reason for selling, to settle an estate. Price, \$2,000. Terms,  $\frac{1}{2}$  cash, plenty of time on balance. Address G. S. Hurd, owner, Harpursville, N. Y., R. D. 2.

## TOWN OF KIRKWOOD

## Population 852

No. 60.—Farm of 35 acres; located 7 miles from Windsor P. O., R. D. 2; 5 miles from railway station at Binghamton, on line of Erie, D. & H., and D., L. & W.; 1 mile from school and churches; 1 mile from cheese factory. Nature of highways, State road, level. Nearest city, Binghamton, population 48,443, 5 miles distant, reached by State road. Surface, rolling, sloping to the south. Soil, loam, very productive. Acres in meadow, 20; in natural pasture, 3; in timber, 2, oak, chestnut, pine and hemlock; acres tillable, 30; 25 apple, 2 pear, 3 plum and 6 cherry trees, grapes, strawberries, red raspberries, black raspberries, blackberries and asparagus. Best adapted to berries, poultry and general farming. Fences, rail and wire, fair condition. House, 7 rooms, wood house attached, in good condition. Barn, 30x36, with stable attached, for 2 horses and 4 cows; 2 hen houses, for 100 hens. Watered, house and barn by well; fields by springs and stream. Susquehanna River 2 miles distant. Occupied by owner. An ideal poultry and berry farm or country home. House, 160 feet from road, among large maple and evergreen trees. Reason for

selling, poor health of owner. Price, \$2,400. Terms, \$1,600 cash. Address E. C. Almy, owner, 214 W. Kennedy street, Syracuse, N. Y.

No. 61.—Farm of 160 acres; located  $2\frac{1}{2}$  miles from Kirkwood P. O., R. D. 1; 2 miles from station at Riverside, on line of Erie R. R.;  $\frac{3}{4}$  mile from school and 2 and 3 miles from churches;  $2\frac{1}{2}$  miles from butter factory; 3 miles from cheese factory; 2 miles from milk station and 3 miles from condensing plant. Highway, state road. Nearest city, Binghamton, 12 miles, population 48,433, reached by rail and highway. General surface,  $\frac{3}{4}$  nearly level, balance smooth. Altitude, 1,000 feet. Nature of soil, clay loam. Acres in meadow, 50; in natural pasture, 25; in timber, 60, chestnut, oak, maple and hemlock, clean, young, second growth. Fruit, 50 apple trees (15 years old). Best adapted to oats, barley, potatoes, buckwheat, hay and corn. Fences, wire and rail. House, 1 story, 7 rooms, wood color, in fair condition. Outbuildings, barn, 30x40, good for cows and horses, pig house and shed. House watered by pipes; barns by spring; fields by spring. Susquehanna River  $1\frac{1}{4}$  miles distant. Occupied by owner. Reason for selling, widow, with 2 young boys, wants to go to city. Has been in the family for 60 years. Price, \$1,900. Terms,  $\frac{1}{2}$  cash. Eleven head of cattle, good team, farm tools, and crops all go for \$2,800,  $\frac{1}{2}$  cash. This is a genuine farm bargain for a quick buyer. Address Bridget Donavan, owner, R. D. No. 1, Kirkwood, N. Y., or Volney K. Soule, agent, Binghamton, N. Y.

No. 62.—Farm of 194 acres; located  $\frac{1}{4}$  mile from Riverside P. O. and railway station on line of Erie R. R.;  $\frac{1}{4}$  mile from school and churches; 2 miles from butter factory; 3 miles from cheese factory and milk station. Highways, State road. Nearest city, Binghamton, 11 miles distant, population 48,443, reached by rail or highway. General surface, 100 acres, river flat, balance sloping. Altitude, 800 feet. Nature of soil, loam. Acres in meadow, 125; in pasture, 30; in timber, 50, hemlock, oak, chestnut and maple. Acres tillable, 125. Fruit, 60 apples, pears, plums and cherries, some grapes. Best adapted to truck gardening, potatoes, oats, rye, clover and alfalfa. Fences, mostly wire, in good condition. House, 10 rooms, lighted by gas plant. Outbuildings, wagon house, 25x30; cow barn, 30x40, with shed; hay barn, 30x40; granary;

blacksmith shop; poultry house. House and barn watered by piped spring, fields by river and springs. Susquehanna river bounds one side of farm. Occupied by owner. Reason for selling, lacks sufficient funds to stock farm properly. Price, \$8,500. Terms, \$5,500 cash, balance on mortgage. Address Ralph Harder, owner, Binghamton, N. Y., or Volney K. Soule, agent, Binghamton, N. Y.

No. 63.—Farm of 102 acres; located 1 mile from Kirkwood P. O.; 2 miles from railway station at Binghamton, on line of D. & H., Erie and D., L. & W. R. Rs.; 1 mile from school; 1 mile from churches and 2 miles from milk station. Highways, slightly hilly. Nearest city, Binghamton, population 48,443, 2 miles distant, reached by rail and highway. General surface, gently sloping; southern exposure. Altitude, 1,400 feet. Nature of soil, loam with clay subsoil. Acres in meadow, 40; in natural pasture, 40; in timber, 20, oak, chestnut, pine and small second growth of hickory. Acres tillable, 80. Fruit, apples and pears. Best adapted to potatoes, hay, grain and fruits. Fences, wire, good condition. House, 10 rooms, 24x48, fair condition. Outbuildings, barn, 36x45; wagon house 16x24; poultry house, 15x30, good condition; barn in fair condition; other buildings need some repairs. House watered by running spring, barns by springs and fields by springs and creek. Occupied by tenant. Reason for selling, other business. Price, \$3,500. Terms, one-third cash, balance on mortgage. Address Mrs. J. S. Waterman, owner, Worcester, N. Y. Owner will rent.

TOWN OF LISLE

Population 1,429

No. 64.—Farm of 260 acres; located 5 miles from Marathon P. O., R. D. 4; 3 miles from railway station at Killawog, on line of D., L. & W. R. R.; ½ mile from school; 3 miles from churches; 1½ miles from butter factory; 3 miles from milk station. Surface of highways, rolling, but good. Nearest city, Binghamton, population 48,443, 22 miles distant, reached by rail. Surface of farm rolling. Soil, gravelly loam. Acres in meadow, 115; in natural pasture, 60; in timber, 50, mostly second growth and hardwood. Acres tillable, 185. Fruit, apple orchard, a few pears and plums. Best adapted to corn, potatoes, hay, oats, buckwheat, cabbage, dairying, stock or sheep raising. Fences, board, rail and

wire, fair. House, 12 rooms, 2 stories, needs some repairs. Outbuildings, 2 basement barns in fair condition, one basement barn needs repairs; one old hay barn; corn crib and good silo. Watered, house, by well; barns and fields, by springs. Occupied by tenant. Reason for selling, owner has other business. Price \$20 per acre. Terms, \$1,000 down. Address H. J. Blanchard, owner, Groton, Tompkins Co., N. Y.

TOWN OF MAINE

Population 1,363

No. 65.—Farm of 120 acres; 5 miles from railway station at Union; 1¼ miles from Union Center, R. D. Soil, clay loam. Acres in meadow, 75; acres in natural pasture, 35; acres in woodland, 10. This is a good dairy or grain farm. Nicely located, 1¼ miles from creamery. Large, warm house. Several large barns and outbuildings, all good. Plenty of good water. Well fenced. Telephone. This farm is on a macadam road which extends to Binghamton, 13 miles distant, and to Maine Village, 1¼ miles distant. Price, \$5,000. Terms, \$1,000 down, balance on time. Address A. E. Whittemore, Owner, Union, N. Y., R. D. 2. Owner will rent for cash.

No. 66.—Farm of 135 acres; located 1 mile from Glen Aubrey P. O., R. D. 1; 6 miles from railway station at Whitney Point, on line of D., L. & W. railway; 1 mile from school; 1 mile from churches; 4 miles from butter factory; 6 miles from cheese factory; 6 miles from milk station; 6 miles from condensing plant on line of Borden's Route. Highways, state road. Nearest city or village, Union, population 1,544; Binghamton, 15 miles distant, population 48,443. General surface, valley land, creek flat and east slope. Altitude, 1,150 feet. Nature of soil, rich clay and gravel loam. Acres in meadow, 50; in natural pasture, 40; in timber, 40, chestnut, oak and 250 sugar maples; acres tillable, 75. Fruit, a fair amount of all kinds. Best adapted to general dairy, hay, rye, oats, buckwheat and general farm products. Fences, wire and rail. House, 8 rooms, in good condition. Outbuildings: large concrete basement barn for 20 cows, hennery, etc. House watered by spring; barns by creek and fields by springs and creek. Nanticoke creek and small river on farm. Chenango River 5 miles distance. Occupied by owner. Reason for selling, owner has joining farm and can't handle both. Price, with 15 choice Holstein cows and team, \$4,500. Terms,

\$1,600 cash, balance mortgage. This is a real dairy farm at a low price. Address Vernon Allen, owner, Glen Aubrey N. Y., or Volney K. Soule, Agent, Binghamton, N. Y.

No. 67.—Farm of 121½ acres; located 3 miles from Maine P. O., R. D. 2; 9 miles from railway station at Union, on line of Erie and Electric R. R.; ¾ mile from school; 3 miles from churches; 3 miles from butter factory. Milk collected at the door. Highways, good, part state road. General surface, 25 acres of creek flat, balance hilly. Nature of soil, part gravel and yellow loam: Acres in meadow, 40; in natural pasture, 56; in timber, 25, beech, maple, ash and chestnut, young timber; acres tillable, 70. Fruit, 32 apple trees. Best adapted to corn, oats, potatoes, grass and gardening. Fences, wire and board, fair condition. House, 20x32, one wing, 14x30 and one 15x25, fine cellar, newly painted. Outbuildings: main barn, 36x46, basement; cow barn, 36x36; wagon house, 16x20; granary, 12x16; hog house, 16x20, all in good condition. House watered by well and spring, barns by spring, fields by spring. Occupied by owner. Reason for selling, old age. Price, \$30 per acre. Terms, half cash, balance on mortgage. Owner, John J. Atwater, Maine, N. Y.

No. 68.—Farm of 215 acres; located 6½ miles from P. O., R. D. 2 from Lestershire; 6½ miles from railway station at Union, on line of Erie, and D., L. & W. railways; 1 mile from school and church; 2½ miles from butter factory; 6½ miles from milk condensing plant. Highways, part macadamized, part dirt. Nearest city, Binghamton, 9 miles distant, population 48,443, reached by rail and highway. Surface of farm, smooth, sloping to south. Soil, black loam. Acres in meadow, 75; in natural pasture, 40; in timber, 15, chestnut, oak and basswood. Acres tillable, 180. Fruit, plums, cherries, pears and apples. Best adapted to all kinds of grain and potatoes. Fences, wire and rail, good condition. House, No. 1, 9 rooms, nearly new; house No. 2, 9 rooms, good. Outbuildings, barn, 30x40; cow barn, 30x44; horse barn, 30x30, good condition; basement barn, 30x40, new. Watered house by well; barns by spring; fields by spring and brook. Occupied by owner. Telephone in house. Reason for selling, poor health of owner. Price, \$7,000. Terms, ½ down, balance on bond and mortgage at 5% interest. Address—Fer-

nando W. Layman, Owner, Lestershire, N. Y., R. D. 2.

#### TOWN OF NANTICOOK

Population 536

No. 69.—Farm of 135 acres; located 1 mile from Ketchumville P. O.; 7 miles from railway station at Newark Valley, on line of L. V. R. R.; 1 mile from school and churches; 1½ miles from butter and cheese factories; 7 miles from milk station and condensing plant. Nature of highways, fair. Nearest village, Newark Valley, population 925, 7 miles distant, reached by highway. Surface, rolling. Soil, rich and fertile. Acres in meadow, 70; in natural pasture, 35; in timber, 30, second growth hard wood; acres tillable, 70. Cherry, pear and apple trees, some small fruits. Fences, barbed wire, mostly in good condition. House, 42x24, 2 stories, with wing, somewhat run down. Barn, 36x40; granary, 12x14. Occupied by tenant. Reason for selling, poor health of owner. Price, \$2,500. If sold within 6 months will throw off \$100. Terms, agreeable to buyer. Address Charles Parsons, Owner, Newark Valley, Broome Co., N. Y. Will rent with option to buy.

No. 70.—Farm of 39 acres; located 3 miles from Lisle P. O., R. D. 1; 3 miles from railway station at Lisle and Whitney's Point, on line of D., L. & W.; 16 rods from school and 3 miles from churches, 3 miles from butter, cheese, and milk station and condensing factory. Highways, ½ hilly, ½ level, part state road, balance dirt roads, good condition. Nearest city, Binghamton; population, 48,433, distance, 22 miles, reached by rail and highway. General surface, rolling and level. Nature of soil, loam and sandy. Acres in meadow, 16; in natural pasture, 18; in timber, 2, 100 sugar maples, beech, hemlock, ash and basswood; acres tillable, all except woods. Fruit, 117 apple trees, young pear and cherry trees, 2 crab apple. Fences, wire, all in first class order. Best adapted to oats, potatoes, corn, rye, buckwheat, beans and alfalfa. House, ground floor space, 45 x 62; chamber room space, 24 x 36; 6 rooms, all new within last two years, open fireplace in living room; good cellar, never freezes and never has to be banked. Outbuildings: basement barn, 30x40, 3 box stalls, stanchions for 6 cows, hen house, 2 stories, 12x16 good condition. House watered by well in house, also well ½ rod from kitchen

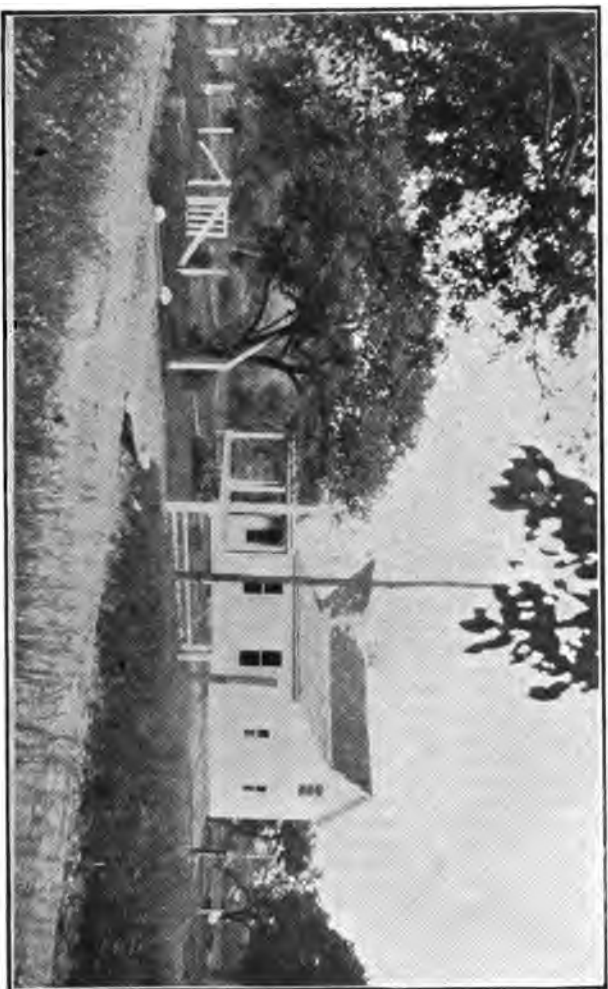


FIG. 268.—HOUSE ON FARM NO. 70, TOWN OF NANTICOKE, BROOME COUNTY.



door, barn by creek within 3 rods. Otselic and Ti river, 3 miles distant. Occupied by owner. Reason for selling, other business. Price, \$2,000. Terms,  $\frac{1}{2}$  down, balance 6%. Address Arthur C. Mathewson, owner, Lisle, N. Y.

TOWN OF SANFORD

Population 2,980

No. 71.—Farm of 185 acres; located 7 miles from Afton P. O., R. D. 2, and railway station, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school, church, store and blacksmith shop; on milk route. Highways hilly but good. Surface of farm, 25 acres of creek flat; balance rolling. Very productive soil. Acres in timber, 50, mostly young chestnut. Fruit, apples. Fences mostly wire; some rail; good condition. House, large, 13 rooms, good condition. Outbuildings, cow barn with basement, 32x56, and annex, 20x30; also new silo; horse barn, 26x40; hen house, 12x20, and granary; all outbuildings painted red. Watered by springs. Occupied by owner. Reason for selling, poor health of owner. Price, \$4,800. Terms, \$1,300 down, balance on mortgage. Address Walter D. Holmes, owner, R. D. No. 2, Afton, N. Y., or Darwin H. Craig, agent, Afton, N. Y.

No. 72.—Farm of 196 acres, located 6 miles from Afton P. O., R. D. No. 2, and railway station on line of D. & H. R. R.;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches, on milk route to shipping station. Highways hilly but good. Nearest city, Binghamton; population, 48,443, 35 miles distant, reached by rail or highway. Altitude, 950 feet; nature of soil, loam. Acres that can be used as meadow, 125; in natural pasture, 50; in timber, 25; hardwood. Acres tillable, 171. Fruit, good orchard. Best adapted to potatoes, oats, buckwheat and corn. Fences, good condition. House,  $1\frac{1}{2}$  stories, 7 rooms, painted, good condition. Outbuildings: basement barn, 30x92; poultry house, 14x28; milk house and tool house, all in good condition. House watered by running water, barns same; fields by creek and springs. Occupied by owner. Reason for selling, wants to go on a smaller place. Price, \$5,000. Terms, \$1,000 cash, balance on mortgage. Price includes 18 good cows, 12 head of young stock and all farming tools and machinery. Address Arthur Colvin, owner, R. D. No. 2, Afton, N. Y., or Darwin H. Craig, broker, Afton, N. Y.

No. 73.—Farm of 350 acres; located 2 miles from North Sanford on R. F. D.; 9 miles from railway station at Deposit, on line of Erie railway, same distance from Afton or Bainbridge on D. & H. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from Protestant church; 2 miles from store and blacksmith shop; 1 mile from cheese factory, on milk route to shipping station. Highways hilly but good. Nearest city, Binghamton, population, 48,443; distance, 38 miles, reached by rail. General surface, good. Altitude, 900 feet. Nature of soil, good loam, very productive. Plenty of firewood and timber for use of farm. Fruit, lots of it. Best adapted to potatoes, oats, buckwheat and corn. Fences, good condition. House, fine, 15 rooms, painted, porch in front. Outbuildings: fine basement barn, built in 1909, 36x66, concrete floor, 40 patent stanchions; new silo; also horse barn, 24x30; hen house, milk house and ice house. House watered by running spring, barn same, fields by springs and creek. Occupied by owner. Reason for selling, wishes to go into other business. Price, \$13,000, including splendid dairy of 40 head, team and tools. Address, Mr. Olmstead, owner, Sanford, N. Y., or Darwin H. Craig, Afton, N. Y.

No. 74.—Farm of 181 acres; located 4 miles from Deposit on R. F. D.; 4 miles from railway station at Deposit, on line of Erie railway;  $\frac{1}{4}$  mile from school, Protestant church, butter factory and cheese factory, and 4 miles from milk station and condensing plant. Highways good, will be state road soon. Nearest city or large village, Deposit, population, 1,864, distance, 4 miles, reached by highway. About 39 miles from Binghamton, 175 miles from New York City. Altitude, 900 feet. General surface, partly level, partly sloping. Nature of soil, good loam. Acres in meadow, 100; in natural pasture, 51; in timber, 30; part hemlock and hardwood. Owner has refused \$1,500 cash for timber; acres tillable, 151. Fruit, 50 nice apple trees and other fruit. Best adapted to potatoes, oats, buckwheat and corn. Fences, good condition. House, large, nicely painted and in good condition, commands a beautiful view. Outbuildings: basement barn, 45x60; horse barn, 28x18; chicken house, 12x24. House watered by running springs, barn same, fields, lots of springs and creek. Delaware River 4 miles distant. Occupied by tenant. Reason for selling,

scarcity of hired help. Price, \$6,000. Terms, \$3,500 down. Address Carrie G. Phinney, owner, 275 Main street, Susquehanna, Pa., or Darwin H. Craig, Afton N. Y.

#### TOWN OF TRIANGLE

Population 1,600

No. 75.—Farm of 126 acres; 6 miles from Whitney's Point, Chenango Forks, R. D. 120 acres meadow and pasture and 6 acres timber. Ten-room house in good condition. Occupied by tenant. Barn, 32x65, with basement, nearly new. Horse barn, 26x36, and other outbuildings. Watered by running water and living springs, piped to house and barn. Fences in good condition. Price, \$2,500. Terms, part in cash, balance on time. C. E. Adams, owner, Triangle, N. Y. Owner will rent with option to buy.

#### TOWN OF UNION

Population 9,486

No. 76.—Farm of 25 acres; located 2 miles from Lestershire P. O., R. D. 1, and railway station on line of 3 railways;  $\frac{3}{4}$  mile from school; 1 mile from churches; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from milk station and 5 miles from condensing plant. Highways, state road and dirt, rolling. Nearest city, Binghamton, 3 miles, population 48,433, reached by highway. General surface, nearly level, south drainage. Altitude, 900 feet. Nature of soil, rich loam. Acres in meadow, 15; in natural pasture, 5; acres tillable, 20. Fruit, grapes, pears, peaches and apples. Best adapted to gardening and general farming. Fences, wire. House, 10 rooms, slate roof, well built. Outbuildings; 2 adjoining barns, 20x30 each; chicken house and piggery. House watered by well; barns by well and fields by springs. Susquehanna River 2 miles distant. Occupied by owner, Reason for selling, owner's business, a builder, which does not permit his working farm steadily. Price, \$3,500. Terms \$2,000 cash, balance to suit purchaser. Address Herbert Preston, owner, R. D. No. 1, Lestershire, N. Y., or Volney K. Soules, agent, Binghamton, N. Y.

#### TOWN OF VESTAL

Population 1,618

No. 77.—Farm of 50 acres; located 2 miles from Binghamton P. O., R. D., and 3 miles from 5 railway lines at Binghamton;  $\frac{1}{4}$  mile from school; 2 miles from

churches;  $2\frac{1}{2}$  miles from several creameries, milk routes, etc. General surface of farm level. Nature of soil, river loam. Acres in meadow 20; in pasture 15; acres tillable, 35. Fruit, 20 apple and cherry trees. Best adapted to truck gardening and general farming. Fences, wire, good condition. House, 2 stories, 9 rooms, nearly new. Barn 35x50, poultry house, brick. House and barns watered by well, fields by brook. This farm has frontage on Susquehanna river. Occupied by caretaker. Reason for selling, owner nonresident in other business. Price, \$5,000. Terms, \$1,500 down, balance to suit purchaser. Address Dwight Clarke, owner, New York City, or Volney K. Soule, broker, Exchange bldg., Binghamton, N. Y.

No. 78.—Farm of 30 acres; located 5 miles from City Hall, Binghamton; 3 miles from railway station at Willow Point, on line of D. & W. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from church; 5 miles to churches of all denominations; 5 miles from butter factory; 3 miles from cheese factory; 3 miles from milk station and 5 miles from condensing plant. Highways, easy rolling, dirt roads. Nearest city, Binghamton, population, 48,433, reached by highway. General surface, level, gentle south slope. Altitude, 1,100 feet. Nature of soil, clay and shale loam. Acres in meadow, 10; in natural pasture, 10. Acres tillable, 20. Fruit, 75 20-year-old prime apples; 100 2-year-old apple, pear and cherry trees. Two acres of berries. Best adapted to peas, beans, oats, hay, buckwheat, corn and tomatoes. This is a fruit and poultry farm. Fences, wire. House, 6-room bungalow, white, in good condition. Outbuildings basement-barn 20x30, basement chicken house 15x20. Watered by well; fields, by spring and brook. Susquehanna river 3 miles distant and Quaker Lake 6 miles. Occupied by owner. Price, \$1,600. Terms, \$1,000, cash, balance mortgage. Stock and tools can be bought if desired. Address Geo. Bartholomew, owner, R. D. Vestal, N. Y., or Volney K. Soule, agent, Binghamton, N. Y.

#### TOWN OF WINDSOR

Population 2,495

No. 79.—Farm of 84 acres located 4 miles from Windsor P. O., R. D. 2; 4 miles from railway station at Windsor on line of D. & H.;  $\frac{3}{4}$  mile from school; 1 and 2 miles from churches; 2 miles from butter factory; 2 miles from cheese fac-

tory; 2 miles from milk station, and 4 miles from condensing plant. Highways, state road through farm. Nearest large village, Windsor, population 637, 4 miles distant; nearest city, Binghamton, population 48,443, distance 11 miles, reached by state road. General surface, level with drainage to south. Altitude, 1,100 feet. Nature of soil, clay and shale loam, a rich farm. Acres in meadow, 40; in natural pasture, 25; in timber, 5, birch, beech, chestnut and pine. Acres tillable 60. Fruit, 30 apple, pear, cherry and peach trees. Best adapted to tomatoes,

cabbage, berries, onions, oats, hay, rye, potatoes, corn and buckwheat. House, 10 rooms, in fine condition. Outbuildings, barn 40x50, cow barn 40x80, tool house, henry and granary. House, piped; barns, piped; fields watered by springs. Susquehanna river 4 miles away. Sky Lake 8 miles. Occupied by owner for 40 years. This farm cost \$4,000, with buildings worth \$3,500. Price, \$3,000. Terms, \$1,000 or more down. Address Titus Estate, Almira Titus, executrix, R. D. No. 2, Windsor, N. Y., or Volney K. Soule, agent, Binghamton, N. Y.

### CATTARAUGUS COUNTY

Area, 1,250 square miles. Population, 65,919. Annual precipitation, 47.71 inches. Annual mean temperature, 47.4°. Number of farms, 6,017. Average value of farm lands per acre, \$34.94, an increase of 32.4 per cent. since 1900. County seat, Little Valley.

Located near the southwest corner of the state with its entire southern boundary on Pennsylvania.

The surface is a hilly, rolling upland, separated by deep valleys into distinct ridges having a north and south direction. Nearly the whole country is broken, but most of the hills are arable to their summit. In some instances they are too steep for proper cultivation but afford excellent pasturage. Toward the northern part the hilly or mountainous features are considerably modified. An unusual number of streams thread the county, the Allegany river and Cattaraugus creek being the principal ones. Most of these streams afford water power and could be made of great value for the use of the farmers. Good building stone is found in large quantities. The soil is rich and productive, highly adapted to hay and forage, dairying and general farming. There are excellent railroad facilities over which the products of the farm can reach ample markets, the city of Buffalo being but a very short distance to the northwest. There are forty miles of state road and 1,576 miles of improved highway.

The principal products of the county are as follows: Corn, 175,962 bushels; oats, 803,741 bushels; barley, 16,799 bushels; buckwheat, 209,281 bushels; potatoes, 879,253 bushels; hay and forage, 237,093 tons; maple sugar, 493,694 pounds. Fruit is successfully grown, the county standing number twelve in the production of apples and fifteen in the production of grapes. There were 5,556 farms reporting domestic animals as follows: milch cows, 59,779; horses, 13,888; sheep, 9,708; swine, 17,854; poultry, 235,088; dairy products amounted to 29,530,826 gallons of milk. The value of dairy products is given at \$2,608,086. The total valuation of all farm property is given at \$30,276,650, an increase of 32 per cent. since 1900. Churches of all denominations are scattered throughout the county. Thirty-two agricultural organizations assist in bettering agricultural and social conditions. The 343 district schools, together with the high schools of the villages, a State Normal School at Fredonia, and St. Bonaventure's College at Allegany afford excellent educational advantages.

The county is traversed by several trunk lines of railways and branches which give it transportation facilities of the highest order. The Erie, Pennsylvania, Pittsburg and Rochester and other lines pass through this county in all directions.

#### TOWN OF ALLEGANY

Population 3,398

No. 80.—Farm of 230 acres; located 1 mile from Allegany P. O. and railway station on line of Erie and Pennsylvania R. R., and trolley; ½ mile from school; 1 mile from churches. Highways, State

road. General surface, half level, half rolling. Nature of soil, gravelly loam. Acres in meadow all. Best adapted to hay, grain of all kinds, corn, potatoes and vegetables. Fences, barbed wire, good condition. House, 16 rooms, fine condition. Main barn 50x75, 3 others.

House and barns watered by wells; fields by stream. Occupied by owner. Price, \$21,000. Terms,  $\frac{1}{2}$  cash, balance, long time. Trolley runs between barn and house. Natural gas for fuel. Address A. J. Smith, owner, Allegany, N. Y., or C. W. Hogue, broker, Franklinville, N. Y.

#### TOWN OF CONEWANGO

Population 1,098

No. 81.—Farm of 300 acres; located 3 miles from East Randolph P. O.; R. D. 1; 5 miles from railway station at Randolph, on line of Erie R. R.; 1 mile from school; 3 miles from churches; 5 miles from milk condensing plant. Highways good. Nearest city, Jamestown, population 31,297, 18 miles distant, reached by rail. Surface of farm, rolling. Soil, fertile. Acres in meadow, 150; in natural pasture, 150; in timber, 25, maple. Acres tillable, 150. Fruit, 50 apple trees. Best adapted to hay, corn and oats. Fences, wire. Large house in good condition. Outbuildings in fair condition. Watered by windmill and creek; hot and cold water in house. Terms, \$1,000 down, balance on mortgage. For price address E. W. Bushnell, owner, East Randolph, N. Y.

No. 82.—Farm of 134 acres; located 2 miles from Randolph P. O.;  $2\frac{1}{2}$  miles from railway station at Randolph, on line of Erie R. R.;  $\frac{1}{2}$  mile from district school; 2 miles from high school; 2 miles from Catholic and Protestant churches;  $2\frac{1}{2}$  miles from cheese factory and condensing plant; 3 miles from milk station. Highways, good. Surface of farm, rolling and level. Altitude, 1,650 feet. Soil, gravelly loam. Acres in meadow, 30; in natural pasture, 60; in timber, 35; beech, maple and hemlock; acres tillable, 85. Fruit, apples. Best adapted to corn, oats and hay. Fences, barbed wire and rail, good condition. House, 14 rooms, good condition. Outbuildings, 2 barns, 30x40, and other buildings, all in good condition. Watered by well and spring. Occupied by tenant. Reason for selling, owner cannot care for it. Price, \$5,000. Terms, \$2,000 cash, balance on mortgage. Address Frank L. Scudder, owner, Randolph, N. Y. Owner will rent for cash or on shares.

#### TOWN OF FARMERSVILLE

Population 948

No. 83.—Farm of 230 acres; located 2 miles from Farmersville Station P. O.,

R. D. No. 2, and railway station on line of B., R. & P. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 2 miles from cheese factory. Nearest village Franklinville, 6 miles distant, population 1,568, reached by good highway. General surface, rolling, some hilly. Acres in meadow, 75; in pasture, 100; in timber, 55; beech and maple, not very good. Acres in meadow, all. Best adapted to barley, buckwheat and potatoes. Fences, good wire. House, 20x24, wing, 16x18, good condition. Outbuildings: 36x76 with gambrel roof, both house and barn nearly new. House watered by well; barn and fields by creek. Reason for selling, owner has other farm, unable to take care of both. Price \$5,000. Terms, part down, balance on mortgage. Address Benjamin Geores, owner. Farmersville Sta., N. Y.

No. 84.—Farm of 854 acres; located 2 miles from Franklinville P. O., R. D., and railway station on line of Pennsylvania R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches;  $\frac{1}{2}$  mile from cheese factory and milk station. Highways, State road. General surface, rolling, hilly and level. Nature of soil, gravelly loam. Acres in meadow, 500; in pasture, 454; in timber, 150, maple and hemlock, first and second growth. Acres tillable, 500. Best adapted to hay, oats, potatoes, barley, wheat and beans. Fences, good barbed wire. Houses, 1 large, 15 rooms, bath, gas and running water. One, large house without conveniences. One small, new tenant house. Outbuildings, horse barn 36x100, cow barn 42x160; 2 other barns 40x100; granary with each barn; poultry house 16x40; milk house; ice house; wagon shed and garage. All buildings painted and in good condition. Two houses, watered by running water; trout stream near all barns; fields watered by trout stream. Occupied by owner. Reason for selling, has 3 other farms. Price, \$40,000. Terms, one-half cash, balance on long time. Buildings so arranged that it can be divided into two equal farms. Address L. H. Stilwell, owner, Franklinville, N. Y., or C. W. Hogue, broker, Franklinville, N. Y.

No. 85.—Farm of 265 acres; located  $3\frac{1}{2}$  miles from Franklinville P. O. and railway station on line of Pennsylvania R. R.;  $\frac{3}{4}$  mile from school;  $3\frac{1}{2}$  miles from churches;  $\frac{1}{2}$  mile from cheese factory;  $3\frac{1}{2}$  miles from milk station and bottling plant. Surface nearly level. Nature of soil, gravelly and muck loam. Acres in meadow, nearly all. Acres in

timber, 30, second growth of maple and beech. Acres tillable, 235. Fruit, 2 apple orchards. Best adapted to hay, grain, potatoes, corn, etc. Fences, barbed wire, good condition. House, 11 rooms, good condition. Outbuildings, new barn, with basement, 36x82, built in 1913; horse barn, 30x40, good condition; granary, hog house, poultry house. House and barns watered by windmill; fields by stream. Occupied by tenant. Possession given at any time. Reason for selling, owner inherited farm and is in other business. Price, \$25 per acre. Terms, \$1,000 cash, balance on mortgage. Address Jay Smith, owner Akron, N. Y., or C. W. Hogue broker Franklinville, N. Y.

No. 86.—Farm of 298 acres; located 7 miles from Franklinville P. O., R. D. and railway station on line of Pennsylvania R. R.; 1 mile from school; 7 miles from churches;  $1\frac{1}{2}$  miles from cheese factory; 7 miles from milk station and bottling works. General surface, sloping. Altitude, 100 feet. Nature of soil, dark loam. Acres in meadow, 100; in pasture, 198; in timber, 50, maple and some hemlock. Acres tillable, 150. Fruit, 2 apple orchards. Best adapted to hay, all kinds of grain, potatoes, etc. Fences, good barbed wire. House, good condition. Outbuildings, good barn, 30x74; 3 other barns, poultry house, hog house. House and barns watered by running water; fields watered by streams and springs. Occupied by owner. Reason for selling, ill health. Price, \$8,000. Terms, \$3,000 cash, balance on mortgage at 5%. Address L. M. Holmes, owner, Yorkshire, N. Y., or C. W. Hogue, broker, Franklinville, N. Y.

No. 87.—Farm of 314 acres; located 3 miles from Farmersville P. O., R. D. No. 2 and railway station on line of B., R. & P. R. R.; 1 mile from school; 4 miles from churches. Nearest village, Ashford, reached by good highway, 4 miles distant. General surface, rolling. Acres in meadow, 50; in pasture, 50; in timber, 114, beech and maple. Acres tillable, 50. Fruit, apples. Best adapted to oats, barley, buckwheat and potatoes. Fences, wire, good condition. House, 18x24, with wing, 16x20. Outbuildings, good size. House watered by well, barns and fields by creek. Occupied by owner. Reason for selling, wishes to move to city. Price, \$5,600. Terms, part cash, balance on mortgage. Price includes team and farm tools. Address Charles Wisner, owner Farmersville Station, N. Y.

No. 88.—Farm of 40 acres; located 5 miles from Franklinville P. O., R. D. No. 1; 3 miles from railway station at Farmersville Station on line of B., R. & P. R. R.; 1 mile from school; 2 miles from churches; 1 mile from cheese factory. Nearest village Franklinville, 5 miles distant, population 1,568, reached by good highway. General surface, level. Acres can be used as meadow, 30; in pasture, 10; in timber, 6, beech and maple. Acres tillable, 30. Fruit, 25 apple trees. Best adapted to oats, potatoes, corn and buckwheat. Fences, poor. House, 26x18, with wing, 16x22; fair condition. Barn, 26x30, fair condition. House watered by well, barn and fields by creek. Unoccupied. Reason for selling, owner moved to village. Price on application. Address M. Wackins, owner, Arcade, N. Y.

No. 89.—Farm of 215 acres; located 6 miles from Franklinville P. O., R. D. No. 1; 4 miles from railway station at Farmersville Station on line of B., R. & P. R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches;  $1\frac{1}{2}$  miles from cheese factory. Nearest village Franklinville, 5 miles distant, population 1,568, reached by good highway. General surface, rolling. Acres in meadow, 50; in pasture, 140; in timber, 25, beech and maple. Acres tillable, 50. Fruit, 20 apple trees. Best adapted to oats, buckwheat, corn and potatoes. Fences, wire, good condition. House, 26x18, with wing, 16x24. Outbuildings: barn 40x80, with wing, 30x50, new; good hog house. Occupied by tenant. Price, \$4,800. Terms, cash. Address Geo. E. Hogue, owner, Arcade, N. Y. Owner will rent.

## TOWN OF FRANKLINVILLE

Population 2,663

No. 90.—Farm of 40 acres; located  $\frac{1}{2}$  mile from Franklinville P. O. and railway station on line of Pennsylvania R. R.;  $\frac{1}{2}$  mile from school and churches; 2 miles from butter and cheese factory;  $\frac{1}{2}$  mile from milk station. Highways, State road. General surface, level. Nature of soil, gravelly loam. Acres in meadow, 35; in pasture, 20; timber, 50, maples. Acres tillable, 35. Fruit 3 plum, 3 cherry, 2 pear, 12 apple trees,  $1\frac{1}{2}$  acres strawberries;  $1\frac{1}{2}$  acres red raspberries. Best adapted to vegetables, berries, hay, corn, oats and beans. Fences, barbed wire, good condition. House, 14 rooms, fine condition. Barn, 40x40, with basement, good condition. House watered by drilled well. Barn and fields by

springs. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms,  $\frac{1}{2}$  cash, balance at 6%. Address C. W. Hogue, owner, Franklinville, N. Y.

No. 91.—Farm of 106 acres; located  $2\frac{1}{2}$  miles from Franklinville P. O., and railway station on line of Pennsylvania R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from milk station and bottling works. General surface, slightly sloping. Nature of soil, sandy loam. Acres in pasture, 65; in timber, 25; acres tillable, 81. Fruit, 2 acres of apples. Best adapted to hay, grain, corn and potatoes. Fences, good barbed wire. House, 9 rooms, woodshed, painted. Outbuildings: barn, 32x44, in good condition; horse barn, 28x32, in good condition; new poultry house, 12x18. House watered by spring in house. Barns by springs and running water; fields by springs and running water. Occupied by owner. Reason for selling, owner in other business. Price, \$4,000. Terms, \$1,000 cash. Address Otis Laidlaw, owner, Franklinville, N. Y., or C. W. Hogue, broker, Franklinville, N. Y.

No. 92.—Farm of 168 acres; located 2 miles from Franklinville Center P. O.;  $2\frac{1}{2}$  miles from Franklinville railway station on line of Pennsylvania R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches;  $\frac{3}{4}$  mile from cheese factory;  $2\frac{1}{2}$  miles from milk station. General surface, slightly rolling; 20 acres on hilltop. Nature of soil, light loam. Acres in meadow, 100; in pasture, 90; in timber, 50, maple and beech, second growth. Acres tillable, 100. Fruit, few apple trees. Best adapted to hay, oats, barley, corn, potatoes, etc. Fences, barbed wire, good condition. House, 7 rooms, woodshed, newly painted. Outbuildings: barn, 30x60, and lean-to, not painted; new hog house, 16x20; new hen house, 12x12; new granary, 16x20. House watered by spring; barns and fields by creek and springs. Occupied by tenant. Possession given at any time. Reason for selling, owner in other business. Price, \$4,500. Terms, \$1,000 cash, balance on long time. Address H. H. Thomas, Franklinville, N. Y., owner, or C. W. Hogue, Franklinville, N. Y., broker.

No. 93.—Farm of 133 $\frac{1}{2}$  acres; located  $3\frac{1}{2}$  miles from Franklinville P. O. and railway station on line of Pennsylvania R. R.; 6 rods from school and church;  $3\frac{1}{2}$  miles from butter factory and condensing plant;  $\frac{1}{2}$  mile from cheese factory. General surface, rolling. Nature

of soil, dark loam. Acres in meadow, 75; in pasture, 80; in timber, 20, second growth; acres tillable, 75. Fruit, 30 winter apple trees. Best adapted to oats, corn, wheat, potatoes and hay. Fences, barbed wire, good condition. House, 9 rooms, woodshed, all in fine condition. Outbuildings: barn, 30x40, and lean-to; barn, 26x36, both gambrel roofs; hog house, poultry house, 42x40; granary, 10x12; wagon shed, 14x24. All buildings nearly new and painted. House watered by drilled well, barn and fields by springs. Occupied by owner. Reason for selling, advanced age. Price, \$4,500. Terms, \$1,700 cash, balance on mortgage. Address Loren Brooks, owner, Franklinville, N. Y., or C. W. Hogue, broker, Franklinville, N. Y.

#### TOWN OF FREEDOM

Population 1,159

No. 94.—Farm of about 200 acres; located  $1\frac{3}{4}$  miles from Sandusky P. O. and railway station, on line of Buffalo & Susquehanna R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches; milk taken at door; 5 miles from powdered milk factory;  $1\frac{1}{2}$  miles from milk station. Highways, in good condition. Nearest large village, Arcade, population 1,294, 5 miles distant, reached by rail or highway. Surface of farm, rolling. Good soil. Acres in meadow, 100; in timber, 15, hemlock, maple, birch and beech. Fruit, 100 trees. Adapted to all crops grown in this climate. Fences, wire, fair condition. House, upright, 18x24; wing, 16x20, and wing, 16x30. Outbuildings, barn, 30x40, with wing, 26x30, and wing, 14x35, cement floors. Watered, house and barn have fine water piped from springs. Occupied by owner. The house has fine bath, hot and cold water. Cement milk house watered with pipes. Reason for selling, owner a widow. Price, \$8,000. Terms, easy. Address Mrs. Marriette J. Charles, owner, Sandusky, N. Y. Owner will rent.

#### TOWN OF HUMPHREY

Population 626

No. 95.—Farm of 22 acres; located  $\frac{1}{4}$  mile from Humphrey Center P. O., R. D. 1; 8 miles from railway station at Great Valley on line of B., R. & P. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches;  $\frac{1}{4}$  mile from cheese factory. Highways, level. Nearest village, Salamanca, 13 miles distant, reached by highway. Acres tillable, 22. Fruit, 40 apple trees. Best adapted to general

farm crops. Fences, poor. House, large, in poor condition. Two barns, in poor condition. House watered by well, barns and fields by creek. Occupied by owner. Price, \$60 per acre. Terms, cash. Address S. H. Butler, owner, Humphrey Center, N. Y.

## TOWN OF MACHIAS

Population 1,529

No. 96.—Farm of 120 acres; located 2 miles from Machias P. O., R. D. 1;  $1\frac{1}{2}$  miles from railway station at Lime Lake, on line of Pennsylvania R. R.; 2 miles from school; 2 miles from churches;  $1\frac{1}{2}$  miles from cheese factory and condensing plant. Highways, level. General surface, level. Altitude, 1,400 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 90; in natural pasture, 25; in timber, 5, maple and beech; acres tillable, 90. Fruit, 25 trees. Best adapted to potatoes, corn, hay and small grains. Fences, good, mostly wire. House, 28x18, 2 stories, with ells 24x16, first class condition. Outbuildings: gambrel roof barn, 40x60, good condition; ells, 28x60 and 26x36, fair condition. House watered by well and cistern, barns by well and wind-mill, fields by spring. Lime Lake  $1\frac{1}{2}$  miles distant. Occupied by owner. Reason for selling, ill health. Price, \$6,000. Terms, \$4,000 cash, balance on mortgage. Address Frank J. Hughes, owner, Machias, N. Y.

No. 97.—Farm of 194 acres; locate 3 miles from Franklinville P. O., R. D. 1, and railway station at Machias Junction, on line of Pennsylvania R. R.;  $\frac{3}{4}$  mile from school; 3 miles from churches;  $\frac{1}{2}$  mile from cheese factory; milk station on farm. Highways, level. General surface, level. Nature of soil, gravel and black loam. Acres that can be used as meadow, 140; in natural pasture, 90; in timber, 15, ash, basswood, maple, beech and hemlock; acres tillable, 60. Fruit, enough for family use. Best adapted to corn, hay, oats and other grains. Fences, wire, good condition. House, cement cellar, good size, excellent condition. Outbuildings: barn, 44x110, with concrete floor and gambrel roof; silo, 14x33; concrete milk house with tank and Chilly King cooler. House watered by well, barns by gasoline pump, fields by creek. Occupied by owner. Reason for selling, ill health. Price, \$17,000. Terms, \$9,000 cash, balance on mortgage. Address J. C. Heidel, owner, Franklinville, N. Y.

## TOWN OF NEW ALBION

Population 1,989

No. 98.—Farm of 165 acres;  $\frac{1}{2}$  mile from New Albion P. O.;  $3\frac{1}{2}$  miles from Cattaraugus. House, large and in good condition. Barns, in good condition. Good orchard. A large quantity of hardwood timber. Land mostly new and well adapted to hay and grain. Watered by creek and several springs. Price, \$4,900. Address A. P. Burroughs, owner, Suffern, N. Y. Owner will rent.

No. 99.—Farm of 316 acres; located 3 miles from Cattaraugus P. O., R. D. 1, and railway station, on line of Erie R. R.; 4 miles from Little Valley, the county seat; 1 mile from school; 3 miles from churches, Methodist, Baptist and Catholic; 2 miles from butter factory; 1 mile from cheese factory; 3 miles from milk station. Highways, good. Twelve miles from Salamanca, reached by trolley from Little Valley. Surface of farm, gently rolling, no steep grades. Altitude, about 1,200 feet. Soil, volusia series, light loam, hardpan subsoil. Acres in meadow, 80; in natural pasture, 50; in timber, 75, maple, beech, chestnut, basswood, ash, etc.; acres tillable, 225. About 60 apple trees. Best adapted to potatoes, oats, corn and hay. Wire fences, in good condition. Nine-room, 2-story house, newly painted inside and outside, modern. Main barn with basement stable, cement floor, 90x34, in good condition; tool house, 24x30, adjoining; granary, 20x24; shop, 18x22; small hen house. Engine house over well adjoining shop. House watered by running water piped from spring to cellar; barns, water pumped from drilled well directly into stable by gasoline engine. Occupied by tenant. Reason for selling, owner lives too far away to manage farm. Price, \$30 per acre. Ten thousand dollars will take the farm, dairy of 30 cows, tools, a 1-horse gasoline engine for pumping, etc.; new silo, 16x33, was built last year; 2 concrete watering troughs, etc. Address Chas. H. Glidden, Little Falls, N. Y., or E. Hawley Ward, owners, Rochester, N. Y.

## TOWN OF PERSIA

Population 1,780

No. 100.—Farm of 25 acres; located  $1\frac{1}{2}$  miles from Gowanda P. O., R. D. 3;  $1\frac{1}{2}$  miles from railway station at Gowanda, on line of Erie R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from seven churches;  $1\frac{1}{2}$  miles from milk station. Highways, good. Surface, somewhat

hilly. Soil, loam and gravel. Acres in natural pasture, 15; in timber, 10, beech, maple, chestnut, hemlock, etc.; acres tillable, 15. Best adapted to wheat, corn, oats, potatoes, etc. Fences, wire. No house or barn. Watered by spring and brook. Occupied by tenant. There is a fine water power site at one end of place. Dam could be constructed 65 feet high and 110 feet long, giving a fall of 80 to 90 feet. Reason for selling, owner has too much land. Price, \$3,000 with water rights, or \$1,500 without water rights. There is also a large lime kiln from which marl could be manufactured. Terms to suit buyer. Address Norman B. Allen, owner, Gowanda, N. Y. Owner will rent for cash for term of 1 to 5 years, or with option to buy.

No. 101.—Farm of 50 acres; located  $1\frac{1}{4}$  miles from Gowanda P. O., R. D. 3;  $1\frac{1}{4}$  miles from railway station at Gowanda, on line of Erie R. R.;  $1\frac{1}{4}$  miles from school and churches;  $\frac{1}{4}$  mile from cheese factory. Highways, good. Nearest village, Gowanda, population 2,012. General surface of farm, hilly. Soil, gravelly loam. Acres in meadow, 15; in timber, 35, chestnut, hemlock, beech, maple, hickory; acres tillable, 15. Fruit, 25 apple trees. Best adapted to crops. Fences, wire, mostly good. Watered by never-failing springs and brook. Occupied by tenant. There are no buildings on this property. Reason for selling, owner has too much land. Price, \$2,000. Terms, \$500 cash, balance to suit purchaser. Address Norman B. Allen, owner, 117 Main Street, Gowanda, N. Y. Owner will rent with option to buy.

No. 102.—Farm of 16 acres; located  $1\frac{1}{2}$  miles from Gowanda P. O., R. D. 3;  $1\frac{1}{2}$  miles from Gowanda railway station, on line of Erie R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $\frac{1}{2}$  mile from cheese factory. Highways, good. Nearest village, Gowanda, population 2,012, distant  $1\frac{1}{2}$  miles, reached by highway. General surface, hilly. Soil, loam. All natural pasture and timber, beech, maple, hickory and chestnut; acres tillable, about 8. Well adapted to all crops. Fences, good, wire. Watered by springs and brook, never-failing. Occupied by tenant. Reason for selling, too much land. Price, \$500. Terms, \$200 cash, balance on easy terms. There are no buildings on this property. A farm of 50 acres adjoining can be bought with the above if desired. Address Norman B. Allen, owner, 117 Main

Street, Gowanda, N. Y. Owner will rent for cash for term of 1 to 5 years or with option to buy.

#### TOWN OF RANDOLPH

##### Population 2,486

No. 103.—Farm of 200 acres; located 2 miles from Randolph P. O. and railway station, on line of Erie R. R.;  $\frac{1}{4}$  mile from school; 2 miles from Catholic and Protestant churches; 2 miles from cheese factory, milk station and milk condensing plant. Highways, good. Surface of farm, rolling. Altitude, 1,650 feet. Soil, sandy loam. Acres in meadow, 50; in natural pasture, 75. Fruit, apples. Best adapted to corn, oats and hay. Fences, barbed wire, mostly good. House, 7 rooms with woodshed. Barn, 42x90. Watered, house, by city water; barn, by well; fields, by springs. Conewango Creek  $\frac{1}{2}$  mile from farm. Occupied by owner. Reason for selling, owner a widow. Price, \$50 per acre. Terms, \$2,500 down, balance on mortgage. Address Mrs. O. C. Wood, owner, East Randolph, N. Y.

No. 104.—Farm of 7 acres; located 1 mile from Randolph P. O. and railway station, on line of Erie R. R.; 1 mile from school, churches, cheese and butter factories; also 1 mile from milk station and condensing plant. Highways, good. Nearest city, Jamestown, population 31,297, 17 miles distant, and reached by rail and highway. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 4; acres tillable, 7. Fruit, apples, pears, grapes, cherries and strawberries. Adapted to all kinds of crops. Fences, barb wire. House, in good condition. One barn and hen house. Watered, house by drilled well; barn, by well; fields, by running water. Occupied by owner. Reason for selling, change of business. Price, \$2,000. Terms, part cash, balance on time. Address Fred C. Myers, owner, Randolph, N. Y.

No. 105.—Farm of 56 acres; located 4 miles from Randolph P. O., R. D. No. 1, and railway station at Kennedy, on line of Erie R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches; 6 miles from butter factory; 4 miles from cheese factory;  $1\frac{1}{2}$  miles from milk station and 3 miles from condensing plant. Highways, good. Nearest city, Jamestown, population 31,297, 12 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,800 feet. Nature of soil, sandy loam. Acres that can be used as

meadow, 20; in natural pasture, 36; in timber 25, maple. Acres tillable, 20. Fruit, apples, cherries and plums. Best adapted to oats, corn and hay. Fences, mostly wire, in good condition. House, 8 rooms, good condition, hall and bath. Outbuildings: barn, 36x44, good condition, poultry house, hog house, 30x27, good condition. House watered by water system, barn by well and fields by creek. Conewango Creek,  $1\frac{1}{2}$  miles distant. Occupied by owner. Price, \$4,000. Terms, cash. There is a good sugar bush on the place, can tap about 400 trees. Address Mrs. Berdene S. Bryant, owner, Randolph, N. Y.

## TOWN OF SALAMANCA

Population 6,760

No. 106.—Farm of 136 acres; located 2 miles from West Salamanca P. O.;  $3\frac{1}{2}$  miles from railway station at Salamanca; 2 miles from railway station at West Salamanca, on line of Erie, B., R., P. and Pa. R. Rs.;  $\frac{1}{2}$  mile from school; 2 miles from Protestant church; 40 rods from cheese factory; 4 miles from milk station. Highways, level. Surface of farm, some hilly and some level. Soil, good gravelly loam, part clay subsoil. Acres in meadow, 25; in natural pasture, about 50; remainder in timber, hard and soft wood. Fruit, about 70 apple trees. Fences, board and wire, good. Best adapted to grass, hay, oats and corn. House, 10 rooms, 2 stories, good condition. Outbuildings: barn, 40x48; barn, 30x44, capable of holding 25 cows with 5 horses, silo, hog pen and hen house, 20x26, fair condition. Watered, house, by well; barns, by spring and creek; fields, by spring and creek. Occupied by owner. Reason for selling, advanced age of owner. Price, \$50 per acre. Terms,  $\frac{1}{2}$  down. Price includes all stock except 1 horse and buggy. Telephone in house. Trolley line about 2 miles from farm. Address J. N. Jones, owner, Little Valley, N. Y., R. D. 2.

No. 107.—Farm of 192 acres; located 3 miles from Little Valley P. O., R. D. No. 2; 4 miles from railway station at Salamanca on lines of Erie, B., R., P. and Pennsylvania R. Rs.; school located across the road; 3 miles from churches; 4 miles from butter factory;  $\frac{1}{2}$  mile from cheese factory. Salamanca reached by good highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 65; in pasture, 60; in timber, 70; hardwood. Acres tillable, 100. Fruit, 250 apple trees, variety. Best adapted to

corn, oats and hay. Fences, good wire. House, 10 rooms; also a tenant house. Outbuildings: barn 36x60, basement in good condition; horse barn, 24x40, good condition; stock barn, 21x52, good condition. House watered by spring and well; barns by running water and creek; fields by creek and springs. Occupied by owner. Reason for selling, wishes smaller farm. Price, \$7,000. Terms, cash. Price includes 15 cows, all good farming tools, 3 young horses. Address Cleon Easton, owner, R. D. No. 2, Little Valley, N. Y.

No. 108.—Farm of 70 acres; located 3 miles from Little Valley P. O., R. D. No. 2; 5 miles from railway station at Salamanca on lines of Erie, B., R., P. and Pennsylvania railroads; 40 rods from school; 3 miles from churches; 5 miles from butter factory and milk station; 3 miles from cheese factory. Nearest city, Salamanca, reached by good highway, 5 miles distant. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 30; in pasture, 40; acres tillable, 70. Best adapted to oats, corn and hay. Fences, wire, good condition. House, 9 rooms, painted, good repair. Outbuildings: barn, 42x42, nearly new, with basement; corn crib, granary, etc. House and barns watered by wells; fields by springs. Occupied by owner. Reason for selling, advanced age. Price, \$3,500. Terms, cash. Price includes all farming tools, 2 horses, 7 cows. Address L. C. Hoard, owner, Little Valley, N. Y., R. D. No. 2.

## TOWN OF SOUTH VALLEY

Population 584

No. 109.—Farm of 77 acres; located 6 miles from Frewsburg P. O. and railway station, on line of D., A., V. & P. R. R.;  $\frac{1}{4}$  mile from school; 1 mile from Protestant church and butter factory; 6 miles from milk plant. Highways, good. Nearest city, Jamestown, 12 miles distant, population 31,297, reached by rail and highway. Surface of farm, rolling and level. Altitude, 2,000 feet. Soil, gravel and clay. Acres in meadow, 34; in natural pasture, 23; in timber, 20, pine, oak, chestnut, etc. All tillable except woodland. Fruit, apples, plums, cherries and peaches. Best adapted to oats, potatoes, rye and millet. Fences, rail and wire, good condition. House, 16x24 and 16x13. Outbuildings: barn, 42x50; barn, 24x36; granary, 16x24; hen house, 12x18; shop, 16x24, all in good condition. Watered, house by well and cistern,

fields and bars by spring. Occupied by owner. Reason for selling, ill health of owner. Price, \$40 per acre. Terms, easy. Address Laverne Wheeler, owner, Frewsburg, N. Y., R. D. No. 86.

No. 110.—Farm of 144½ acres; located 7 miles from Frewsburg P. O., R. D. 86; 5 miles from railway station at Ononville, on line of Penn. R. R.; 1¼ miles from school; 1½ miles from church and butter factory; 7 miles from milk condensing plant. Highways good. Nearest city, Jamestown, 11 miles distant, population 31,297, reached by highway. Surface of farm, rolling. Altitude, about 1,900 feet. Soil, good, clay loam. Acres in meadow, 42; in natural pasture, 57½; in timber, 45, chestnut and hardwood. Acres tillable, 99½. Fruit, 90 apple, 12 plum, 8 pear, 8 peach trees; also currants, gooseberries and strawberries. Fences, wire and rail, good condition. House, 9 rooms, good condition. Outbuildings, barn, 38x48, with cement basement; barn, 30x30; 2 silos, 12x24 and 12x30, good condition; henhouse and hoghouse. Watered, house and barns by well, fields by springs. Occupied by owner. Reason for selling, advanced age of owner. Price, \$30 per

acre. Terms, one-half cash, balance on mortgage. Address Herbert Morrill, owner, Frewsburg, N. Y.

No. 111.—Farm of 75 acres, located 4 miles from Ononville P. O. and railway station, on line of Penn. R. R., 1¼ miles from school, 4 miles from Catholic and 1½ miles from Protestant church and butter factory, 6 miles from milk condensing plant. Highways good. Nearest city, Jamestown, 13 miles distant, population 31,297, reached by rail and highway. Surface of farm hilly. Soil, clay, good. Acres in meadow, 35; in natural pasture, 35; mostly chestnut, second growth. Acres tillable, 40. Fruit, 30 apple, 2 pear and 2 cherry trees. Best adapted to oats, potatoes, hay and wheat. Fences, wire, good. House, 25x16, good condition. Outbuildings: barn 30x40, henhouse 12x16, granary 10x16, all in good condition. Watered, house by well, barns and field by creek. Occupied by owner. Reason for selling, owner wishes to go into other business. Price, \$4,000, including 10 cows, 3 horses, 50 chickens, wagons and implements. Terms easy. Address Henry Gribbin, Owner, Ononville, N. Y. Box 62.

### CAYUGA COUNTY

Area, 752 square miles. Population, 67,106. Annual precipitation, 44.71 inches. Mean temperature, 50.4°. Number of farms, 4,785. Average price of farm land per acre, \$50.40. County seat, Auburn.

Located in the central part of the state in the inland lake section. Its boundaries are long, narrow and irregular, trending north and south. The northern line is bounded by Lake Ontario, the lower western part by Lake Cayuga and touching Skaneateles Lake on the east. Lake Owasco is located in the center of the county, not far from the city of Auburn.

The surface features of the county are undulating. The Seneca river traverses the upper half of the county with numerous small streams affording good water power and giving, with the ponds and lakes of the county, an abundant supply of excellent water.

The soil is very fertile, consisting of a fine quality of sandy or gravelly loam intermixed with clay, muck and alluvium in the northern part, and a very productive gravelly and clay loam in the southern part. Markets are easily reached over the New York Central, the Lehigh Valley and the electric lines that traverse almost every portion of the county. The highways are in excellent condition. Along the shores of Lake Cayuga are numerous quarries of water lime, quicklime, gypsum and sandstone.

There are reported on the farms of the county 103,173 domestic animals and 360,543 head of poultry. The products of the county are milk, 14,034,684 gallons from 27,199 dairy cows, the total receipts for all dairy products being \$1,251,408. The principal crops are corn, 850,149 bushels; oats, 1,210,652 bushels; barley, 300,512 bushels; buckwheat, 388,598 bushels; potatoes, 1,037,839 bushels; hay and forage, 151,721 tons. The county ranks first in barley and buckwheat, second in corn and poultry, fifth in honey and seventh in oats. Cayuga county is also an excellent fruit county. Apples, cherries, peaches, pears, plums and prunes are raised in abundance and are of the finest quality. There are scattered throughout the county a number of excellent district schools, high and graded schools, all up to the standard of excellence demanded by the state. Wells College for women is located

at Aurora. The total value of farm property in this county is \$26,915,448, an increase of 19.8 per cent. over the value given in 1900. .

## TOWN OF BRUTUS

Population 2,221

No. 112.—Farm of 23 acres; located  $2\frac{1}{2}$  miles from Weedsport P. O., R. D., and railway station on line of West Shore Ry.; 1 mile from school;  $2\frac{1}{2}$  miles from churches of all denominations; 3 miles from milk station. Highway, good. Nearest village, Weedsport, population 1,344, reached by highway. General surface of farm, rolling. Altitude, 400 feet. Nature of soil, gravelly loam. Acres tillable, 21. Fruit, apples, pears, peaches, cherries and plums. Best adapted to grain and alfalfa. Fences, in fair condition. House, 6 rooms, in fair condition. Barn, 30x40, with basement and wing for wagons. Watered, house by well; barns by well; fields by spring. Occupied by owner. Price, \$2,100. Term on application. Address Eugene Hoyt, Owner, Weedsport, N. Y., or F. E. Bush & Co., agents, Weedsport, N. Y.

## TOWN OF CATO

Population 1,569

No. 113.—Farm of 65 acres; locate 3 miles from Weedsport P. O., R. D.; 1 mile from railway station at Brick Church, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from M. E. church; 1 mile from milk station. Highway, good. Nearest village, Weedsport, population, 1,344, reached by highway. General surface of farm, rolling. Altitude, 400 feet. Nature of soil, dark sandy loam. Acres in meadow, 20; in pasture, 10; in timber, 7; tillable, 50. Fruit, apples and small fruit; peaches, pears, etc. Best adapted to general grain and hay. Fences, in fair condition. House, 9 rooms. Barn, 36x66; silo, in good condition. Horse barn and small hay barn. Watered, house by well barns by well; fields by springs. Seneca River 1 mile distant. Occupied by owner. Reason for selling, poor health. Price, \$4,800. Terms, \$2,000 cash, balance subject to mortgage. Address E. Morrill, owner, Weedsport, N. Y., or F. E. Bush & Co., agents, Weedsport, N. Y.

No. 114.—Farm of 225 acres; located 3 miles from Jordan P. O. and railway station on line of R., S. & E. trolley, N. Y. C. and West Shore Rys.; 80 rods from school; 3 miles from Catholic, Baptist, Methodist and Presbyterian churches;  $1\frac{1}{2}$  miles from butter factory;  $1\frac{1}{2}$  miles from milk station.

Highway, good. Nearest villages, Jordan and Weedsport, populations 978 and 1,344 respectively, distance 3 miles, reached by highway. General, surface of farm, level. Altitude, 452 feet. Nature of soil, gravelly loam. Acres in meadow, 60; in pasture, 12; in timber, 10, spruce, hemlock, beech, etc., acres tillable, 203. Fruit, 7 apple, variety of fruit for family use. Best adapted to alfalfa, tobacco, cabbage, grain and hay. Fences, wire, in good condition. House, in good condition, furnace, bath, etc. Barn, 40x70, with basement, 30x60; tobacco shed, 24x60, all in excellent condition. Watered, house, by pressure system, barns by windmill; fields by stream. Otter Lake 1 mile away; Seneca River 2 miles distant. Occupied by tenant. Reason for selling, owner wishes to retire. Price, \$17,000. Terms, \$5,000 cash, balance at 6 per cent. Address William Sayles, owner, Weedsport, N. Y., or Geo. Good-elle, Inc., agents, 203 E. Fayette St., Syracuse, N. Y. Will rent.

No. 115.—Farm of 118 acres; located  $4\frac{1}{2}$  miles from Weedsport P. O., R. D.;  $1\frac{1}{2}$  miles from railway station at Brick Church, on line of L. V. R. R.; 1 mile from school;  $\frac{1}{4}$  mile from M. E. church;  $1\frac{1}{2}$  mile from milk station. Highway, good condition. Nearest village, Weedsport, population 1,344, reached by rail and highway. General surface of farm, rolling. Altitude, 400 feet. Nature of soil, sandy loam, also clay loam. Acres in pasture, 25; timber, 15, second growth; tillable, 90. Fruit, apples, 40 old, 70 young trees, small fruit. Best adapted to general farming and alfalfa. Fences, in good condition. House, 10 rooms, good condition. Outbuildings: hay barn, 36x48, with basement; another barn, 30x56; sheds, milk house, hen and hog house. Watered, house by well; barns by windmill pump. Seneca River  $2\frac{1}{2}$  miles, also Barge Canal. Reason for selling, old age. Price, \$8,500. Terms, \$2,500 cash, balance on mortgage. Address J. B. Smith, owner, Weedsport, N. Y., or F. E. Bush & Co., agents, Weedsport, N. Y.

## TOWN OF CONQUEST

Population 1,103

No. 116.—Farm of 100 acres; located 6 miles from Cato P. O. and railway

station on line of L. V. Ry.,  $1\frac{1}{2}$  miles from school;  $\frac{1}{2}$  mile from Methodist church; 7 miles from butter factory;  $2\frac{1}{2}$  miles from milk station. Highway, good condition. Nearest village, Cato, population 374, reached by highway. General surface of farm, level. Altitude, 300 feet. Nature of soil, black and gravelly loam. Acres in meadow, 30; in pasture, 15; in timber, 10; tillable, 80. Fruit, 40 apple, all kinds of small fruit for family use. Best adapted to alfalfa, oats, wheat and potatoes. Fences, in fair condition. House, 8 rooms, in good condition. Barns, 36x62, with basement; horse barn, 20x30; granary, 16x22; wind mill; 6 acres of alfalfa. Watered, house, by wells; barns by wells; fields by stream. Lake Ontario 10 miles distant, Seneca River 6 miles. Occupied by owner. Reason for selling, other business. Price, \$4,000. Terms, \$1,500 down, balance on mortgage. Address C. Colvin, owner, Cato, N. Y., or F. E. Bush & Co., agents, Weedsport, N. Y.

#### TOWN OF IRA

Population 1,451

No. 117.—Farm of 200 acres; located 8 miles from Meridian P. O., R. D. 49; 5 miles from railway station at Cato, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches;  $3\frac{1}{2}$  miles from butter factory; 5 miles from cheese factory; 5 miles from milk station; 11 miles from milk condensing plant. Highways fairly good. Nearest city, Fulton, 12 miles distant, population 10,480, reached by highway. Surface of farm a little rolling. Soil, gravelly and clay loam. Acres in meadow, 25; in natural pasture, 10; in timber, 40, beech, maple, elm and ash. Acres tillable, 150. Fruit, 100 apple, 20 cherry, 10 pear and 10 plum trees. Adapted to all crops grown in this climate. Fences, barbed wire and woven wire. House, upright 18x28, south wing, 16x36, north wing, 20x24, suitable for two families. Outbuildings, 2 sets, barn, 100x32; cow stable, 24x60; tobacco shed, 24x60; hog-house, cornhouse and henhouse. Watered by well and springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$9,000. Terms, \$2,000 down, balance on mortgage at 5% interest. Address Isaac O. Blake, owner, 138 Van Anden Street, Auburn, N. Y. Owner will rent.

No. 118.—Farm of 184 acres; located

1 mile from Ira P. O. and railway station, on line of L. V. R. R.; 30 rods from school; 1 mile from churches; 4 miles from butter factory; 4 miles from cheese factory and 1 mile from milk station. Highways, improved road. Nearest village Cato, population 374. 4 miles distant, reached by rail and highway. General surface level. Nature of soil, clay and limestone. Acres that can be used as meadow, 154; in natural pasture, 30; in timber, 30, mostly hard wood. Acres tillable, 150. Fruit, 150 bearing apple trees, peaches and small fruit. Best adapted to dairying and general farm crops. Fences, fair condition. Large square house, 10 rooms, in good condition, newly painted. New barn built in 1913, 40x80, with basement, plank frame, gambrel roof with steel roofing, a small barn, poultry house and pig house. House watered by well, barns by well and fields by creek. Occupied by owner. Reason for selling, owner desires a smaller farm. Price, \$10,000. Terms, cash. Excellent alfalfa land, sap bush of over 300 trees. Address H. J. Wolven, owner, Ira Station, N. Y.

No. 119.—Farm of 80 acres; located  $1\frac{1}{2}$  miles from Cato P. O., R. D. No. 48, and railway station, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches. Highways, level and good. Surface, rolling. Acres that can be used as meadow, 70; in natural pasture, 70; in timber, 10, beech and maple. Acres tillable, 70. Fruit, all kinds, good orchard. Best adapted to all kinds of grain and produce. Fences, wire and rail. House, 10 rooms in good condition. Outbuildings: large grain barn, corn house, poultry house, wagon house, etc. House, watered by well and cistern, barns by well, fields by spring. Occupied by tenant. Reason for selling, ill-health. Price, \$4,000. Terms, \$2,000 cash, balance on mortgage. Address Samuel B. Daratt, owner, Cato, N. Y.

No. 120.—Farm of 128 acres; located 1 mile from Ira P. O.,  $3\frac{1}{2}$  miles from railway station, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches and  $3\frac{1}{2}$  miles from milk station. Highways, good. Nearest city, Fulton, population, 10,480, 11 miles distant, reached by highway. General surface, rolling. Nature of soil, clay. Acres that can be used as meadow, 110; in natural pasture, 3; in timber, 13, beech, maple, hemlock and elm. Acres tillable, 110. Fruit, apples, peaches,

pruner, pears, grapes and currants. Best adapted to wheat, barley, oats, corn, tobacco and potatoes. Fences, fair condition. House, 10 rooms and 8 smaller rooms for clothes presses, etc. Outbuildings: barn, 36x78, with basement; tobacco shed, 24x50; hay shed, 24x48; corn house, with basement, 18x28; hog pen; poultry house, 12x60. House watered by running water, barns same. Occupied by tenant. Reason for selling wishes to retire. Price, \$5,500. Terms, \$2,000 cash, balance on mortgage. Address Oscar A. Foote, owner, Cato, N. Y.

No. 121.—Farm of 135 acres; located  $2\frac{1}{2}$  miles from Cato P. O., R. D. No. 48 and railway station, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 3 miles from butter factory and 2 miles from milk station. Highways, good. General surface, rolling. Nature of soil, gravel loam. Acres that can be used as meadow, 105; in timber, 30, 10 acres of hard wood and 20 acres of soft wood. Acres tillable, 104. Fruit, 150 apple trees and good variety of small fruit. Best adapted to grain of all kinds. Fences, American wire and barbed wire. House, 10 rooms, brick, good condition. Outbuildings, grain barn, 40 x 60, with basement, concrete floor, horse barn, corn house hog house, etc. House watered by well, barns by well and fields by well. Forest Lake, 3 miles distant. Occupied by owner. Reason for selling, owner wishes to return to the city. Price, \$6,000. Terms, \$4,000 cash, balance on mortgage. Address W. A. Dabatt owner, Cato, N. Y.

No. 122.—Farm of 119 acres, located 3 miles from Ira P. O., R. D., No. 50; 5 miles from Ira station and Cato on line of L. V. R. R.;  $\frac{3}{4}$  mile from school; 3 miles from churches; 3 miles from butter and cheese factory. Nearest city, Fulton, population 10,480, 10 miles distant, reached by highway. General surface, sloping to south. Nature of soil, gravel and loam. Acres in pasture, 15; in timber, 30, ash, elm and soft maple. Acres tillable, 89. Fruit, 60 apples, some small fruit. Best adapted to grain, potatoes and tobacco. Fences, wire, poor condition. House, 9 rooms, good condition. Outbuildings, barn, 30x50, on basement; wagon house; hog house; poultry house and tobacco house. House watered by spring, barns by piped water; fields by springs. Occupied by tenant. Reason for selling, advanced age of owner. Price \$2,500. Terms, \$800 down, bal-

ance on time. Address William Wiggins, owner, Wolcott, N. Y.

No. 123.—Farm of 75 acres; located 2 miles from Lysander P. O., R. D. 50; 6 miles from railway station at Lamson, on line of D., L. & W. R. R.; 2 miles from churches; 2 miles from district school; 2 miles from cheese factory and milk station. Highways, good. Nature of soil, sandy loam and some gravel. Acres in pasture 3, in timber, second growth of beech and maple. Acres tillable, 65. Fruit, 30 apple and 2 pear trees. Best adapted to wheat, oats, corn, potatoes, peas and tobacco. Fences, wire and stone, in poor condition. House, 2 stories and attic, 24x35, wing, 1 story and attic, 18x30. Outbuildings: barns, 30x40, corn house, poultry house, all in good condition. House watered by well and cistern, barns by creek. Occupied by tenant. Reason for selling, old age. Price, \$33 per acre. Terms, cash. Would accept mortgage of \$800. Address Mrs. Sarah M. Deball, owner, Lysander, N. Y., or D. M. Perine, broker, 415 Forman Ave., Syracuse, N. Y.

#### TOWN OF LEDYARD

Population 1,719

No. 124.—Farm of 110 acres; located 2 miles from Aurora P. O., R. D. 29;  $1\frac{1}{4}$  miles from railway station at Levanna, on line of L. V. R. R.; 1 mile from school; 2 miles from Protestant and Catholic churches; 2 miles from butter factory and skimming station. Highways in good condition. Nearest city, Auburn, 14 miles distant, population 34,668, reached by rail and highway. Surface of farm, level. Altitude, about 600 feet. Soil, dark loam, clay subsoil. Acres in meadow, 35; in natural pasture, 15; in timber, 15, sugar maple, basswood, hickory and oak. Acres tillable, 80. Fruit, 20 apple, 30 peach and 8 cherry trees. Adapted to all crops grown in this climate, ideal for alfalfa. Fences, woven wire, mostly new. House, 9 rooms, good condition. Outbuildings, barn, 20x60; barn, 36x65, good condition; pighouse, tool shed, work shop, corn crib and several chicken houses. Watered, house by well and cistern, barns by well, fields by well. This farm is 1 mile from Cayuga Lake. Occupied by owner. Reason for selling, owner has other business in Philadelphia. Price, \$65 per acre. Terms, \$2,700 down, balance on mortgage. This would make a fine fruit or poultry

farm. Address J. P. Davenport, owner, Aurora, N. Y., R. D. 29.

#### TOWN OF MENTZ

Population 1,909

No. 125.—Farm of 70 acres; located  $2\frac{1}{4}$  miles from Port Byron P. O., R. D.; 2 miles from railway station on line of N. Y. C. & W. S. R. R., also R. S. & E. trolley and the Barge canal passes close to farm; 1 mile from school and  $\frac{1}{4}$  mile from churches;  $1\frac{3}{4}$  miles from butter factory;  $1\frac{1}{4}$  miles from milk station. Highways, wide road, level, good condition. General surface of farm, slightly rolling. Altitude, 500 feet. Nature of soil, gravel and lime loam. Acres tillable, 65. Fruit, about 100 trees, 25 acres in meadow, 2 in timber, 20 in pasture. Best adapted to alfalfa, corn, oats, potatoes and general crops. Fences, wire and rail, fair. House, fairly good, 7 rooms. Outbuildings, barn 30x70, fair condition. House watered by well, barns by springs, fields by springs and creek. 4 miles from Seneca river, 8 miles from Skaneateles Lake and 9 miles from Cayuga Lake. Occupied by owner. Will give possession at any time. Has 33 acres of good land adjoining, with house and buildings, which he will sell with the above 70 acres. Reason for selling, old age. Price, \$3,800. Terms, \$1,500 cash payment, balance 5% mortgage. Address Charles Morgan, owner, Port Byron, N. Y., or Chas. S. Hutchinson, agent, 107 West Kennedy street, Syracuse, N. Y.

#### TOWN OF MORAVIA

Population 2,160

No. 126.—Farm of 92 acres; located  $3\frac{1}{2}$  miles from Moravia P. O., R. D. 13, and railway station, on line of Lehigh Valley Ry.; 1 mile from district school and  $3\frac{3}{4}$  miles from high school;  $3\frac{1}{2}$  miles from churches;  $3\frac{1}{2}$  miles from butter factory;  $1\frac{1}{2}$  miles from cheese factory and  $3\frac{1}{2}$  miles from milk station. Highways, good, State road. Nearest village, Moravia, population 1,324, reached by State road. Surface of farm, rolling, gradual slope to west. Soil, loose gravel loam. Acres in meadow, 66; in natural pasture, 20; in timber, 6; hardwood; acres tillable, 70. Variety of fruits. Adapted to all kinds of crops. Fences, wire, fairly good condition; 10-room house. Barn, hen house, granary. Watered, house by running water; barn by running water; field

trout brook. Farm is situated within 4 miles of Owasco Lake and 9 miles of Skaneateles Lake. Occupied by owner. Reason for selling, poor health. Price, \$7,000. Terms, easy. Auburn and Moravia bus line passes twice a day. Address W. J. Lester, owner, R. D. 13, Moravia, N. Y.

#### TOWN OF NILES

Population 1,209

No. 127.—Farm of 175 acres; located 6 miles from Moravia P. O., R. D. and railway station on line of Lehigh Valley R. R.; 1 mile from school and 1 mile from churches; 1 mile from milk station. Highway, good with State road  $\frac{1}{2}$  mile away. General surface, generally level. Altitude, 700 feet. Nature of soil, gravel and clay loam. Acres tillable, 130. Acres in meadow, 75; in natural pasture, 25; in timber, 30, second growth. Best adapted to wheat, potatoes and general crops. Fences, post and wire. House, original house burned, the small house can be used. Outbuildings, 2 barns 40x80 and 40x70, in fair condition and some smaller outbuildings. House watered by well; barns by well and springs. Cayuga and Owasco Lakes very near. Occupied by tenant. Reason for selling, old age. Price, \$4,500. Terms, \$900 down and balance on 5% mortgage to run to suit purchaser. Address W. W. House, owner, Owasco, N. Y., or Chas. S. Hutchinson, agent, 107 West Kennedy street, Syracuse, N. Y.

#### TOWN OF SEMPRONIUS

Population 756

No. 128.—Farm of 86 acres; located 4 miles from Moravia P. O., R. D. 16, and railway station, on line of Lehigh Valley Ry.; 1 mile from school; 2 miles from churches;  $\frac{1}{2}$  mile from butter factory; 3 miles from cheese factory and 4 miles from milk station. Highways, good. Nearest city, Cortland, population 11,504, 14 miles distant, and reached by both rail and highway. Surface of farm, sloping. Altitude, 400 feet. Soil, gravelly loam. Acres in meadow, 34; in natural pasture, 20; in timber, 16, consisting of sugar maple, basswood, ash and beech; acres tillable, 50. Fruit, apples, pears, plums, cherries, peaches and small fruits. Best adapted to corn, oats, barley, potatoes and dairying. Fences, mostly mesh wire; 12 room house, good condition; 2 barns and 3 hen houses. House and

barns are supplied with spring water, also fields. Farm is within 7 miles of Owasco Lake, and 4 miles of Como Lake. Occupied by owner. Reason for selling, poor health. Price, \$3,600. Terms, \$1,000 down, balance on time. Address Frank A. Corry, owner, Moravia, N. Y.

No. 129.—Farm of 140 acres; located 7 miles from Moravia P. O., R. D. 59, and railway station, on line of Lehigh Valley Ry.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory; 2 miles from cheese factory. Highways, gravel and State road. Nearest village, Moravia, population 1,324, reached by highway. Surface of farm mostly level. Altitude, 1,500 feet. Soil, rich loam. Acres in meadow, 60; in natural pasture, 30; in timber, 10, consisting of ash and elm; acres tillable, 100. Fruit, apples, pears and plums. Best adapted to potatoes, cabbage, barley, oats, corn and buckwheat. Fences, wire. House, 12 rooms, good condition; 2 barns; pig pen; chicken house; granary; silo. House and barns are supplied with water; fields, by springs. Farm is situated  $2\frac{1}{2}$  miles from Skaneateles Lake and in the vicinity of Oswego Lake. Unoccupied at present. Reason for selling, other business. Price, \$6,000. Terms, \$3,000 cash, balance on mortgage. Address George S. Cady, owner, Box 364, Moravia, N. Y.

No. 130.—Farm of 114 acres; located 7 miles from Moravia P. O., R. D. 15; 9 miles from railway station at Homer, on line of D., L. & W. railway; 1 mile from school; 2 miles from churches; 2 miles from butter factory; 9 miles from cheese factory and 7 miles from milk station. Highways, some hilly but good. Nearest city, Cortland; nearest villages, Homer and Moravia, population 11,504, 2,695 and 1,324, respectively. Cortland is 12 miles distant, and reached by highway. Soil, gravelly loam. Acres in meadow, 45; in natural pasture, 30; in timber, 25, consisting of beech, birch, maple, hemlock, ash, chestnut and oak; acres tillable, 89. Fruit, apples, pears, plums and cherries. Best adapted to oats, barley, corn and potatoes. Fences, post and wire. House, 15 rooms, first class condition; 2 barns; hen house; hog house. Barns need some repair. Watered, house by well; barns by springs; fields by springs. Farm is situated within  $2\frac{1}{2}$  miles of Skaneateles Lake. Occupied by owner. Reason for selling, poor health. Price, \$6,000.

Terms, cash. Address William B. Harmon, owner, R. D. 15, Moravia, N. Y.

No. 131.—Farm of 300 acres; located 2 miles from New Hope P. O., R. D. 59; 10 miles from station at Moravia, on line of Lehigh Valley Railway;  $\frac{1}{2}$  mile from school; 2 miles from churches, 2 miles from butter factory; 3 miles from cheese factory and 10 miles from milk station. Highways are good. Nearest village, Moravia; population 1,324, reached by highway (State road). Surface of farm, mostly level. Soil, good, dry, warm soil. Acres in meadow, 100; in natural pasture, 75; in timber, 25, consisting of beech, maple and basswood; acres tillable, 200. Fruit, apples, cherries, plums and grapes. Best adapted to oats, corn, barley, buckwheat, potatoes, cabbage and hay. Fences, wire, all in good condition; 10-room house, with creamery attached, in good condition; 2 barns, hen house, hog pen, shop, silo. Watered, running water in house; barns and fields, by springs. Farm is within  $\frac{1}{2}$  mile of Skaneateles Lake. Occupied by owner. Reason for selling, poor health. Price, \$8,000. Terms, half cash, remainder on mortgage. This is an excellent dairy farm. Address Fred J. Cady, owner, Moravia, N. Y., R. D. 59.

No. 132.—Farm of 251 acres; located 6 miles from Moravia P. O., R. D. 16, and railway station on line of Lehigh Valley R. R.;  $\frac{3}{4}$  mile from school and churches; 1 mile from butter factory; 4 miles from cheese factory; 6 miles to milk station. Highway, good. General surface, rolling. Altitude, 1,000 feet. Nature of soil, gravelly. Acres in meadow, 60; in pasture, 15; in timber, 70, beech and maple. Acres tillable, 170. Fruit,  $5\frac{1}{2}$  acres of apples, age 10 to 40 years, small fruits for home use. Best adapted to general farm crops. Fences, wire and wall. House, large, in good condition. Outbuildings: barn, 40x120, with ell 40x45; barn, 18x30; hog house, 30x15; poultry house and two store houses; tenant house and two barns. House watered by running water and two wells; running water in barns; fields watered by creek and springs. Occupied by owner. Reason for selling, old age of owner. Price, \$16,000. Terms, reasonable. Address Charles Fitts, owner, R. D. No. 16, Moravia, N. Y.

#### TOWN OF SPRINGPORT

Population 1,447

No. 133.—Farm of 250 acres; located  $\frac{1}{2}$  mile from Union Springs P. O. and

railway station, on line of Lehigh Valley R. R.;  $\frac{1}{2}$  mile from high school and seminary, churches, butter factory, milk station and milk condensing plant. Highways good, State road building to Auburn. Surface of farm, slightly rolling. Altitude, 500 feet. Soil, lime loam, good alfalfa soil. Acres in meadow, 75, of which there are 30 acres of alfalfa; acres in timber, 10, honey locust; acres tillable, 240. Fruits, several varieties, especially fine for raising peaches and small fruits. Adapted to wheat, corn, potatoes, oats, etc. Fences, woven wire and honey locust posts, of which 1 mile of fencing was built last year. Three houses, one of 18 rooms, lighted by gas and electricity, steam heated; has the latest improved plumbing throughout; 1 of 8 rooms and 1 of 10 rooms. Outbuildings: grain and basement barn, 45x100, 40 stanchions; hay barn, 60x100, hog and poultry houses, carriage and horse stables, ice house and tool house, garage for 3 automobiles; some of the buildings recently painted. Watered, house by spring water; barns by running water; fields by springs and streams. Cayuga Lake, 40 miles in length, is close by and in sight of the buildings. Occupied by tenant and owner. Reason for selling, owner engaged in other business. Price and terms will be given upon application. Owner will sell stock and tools if desired. Address Chas. S. Hutchinson, 107 West Kennedy Street, Syracuse, N. Y.

#### TOWN OF SUMMER HILL

Population 613

No. 134.—Farm of 187 acres; located 6 miles from Locke P. O., R. D. No. 20; 5 miles from railway station at Groton, on line of Lehigh Valley R. R.;  $\frac{1}{2}$  mile from school, Protestant church and butter factory; 5 miles from milk station and milk condensing plant. Highways hilly. Nearest city, 10 miles distant, reached by highway. Surface of farm nearly level, a little rolling. Altitude, 1,100 feet. Soil, dark loam. Acres in meadow, 75; in timber, 40, beech, maple and basswood; acres tillable, 145. Fruit, 100 apple, 12 pear and 10 cherry trees. Best adapted to corn, potatoes, buckwheat and hay. Fences, barbed wire. House, 12 rooms. Outbuildings: barn, 56x24, fair condition; barn, 70x30, fair condition; hen house, 18x60. Watered, house and barn by well; fields by spring. Occupied by owner. Reason for selling,

advanced age of owner. Price, \$6,000. Terms, \$1,000 down and long time for balance. Address Luther Carpenter, owner, Locke, N. Y., R. D. No. 20. Owner will rent.

No. 135.—Farm of 127 acres; located 7 miles from Locke P. O., R. D. No. 20; 6 miles from railway station at Homer, on line of D., L. & W. R. R.; 20 rods from school; 1 mile from Baptist church;  $1\frac{1}{2}$  miles from butter factory; 6 miles from milk station; 8 miles from milk condensing plant. Highways, somewhat hilly. Surface of farm, rolling. Altitude, about 1,100 feet. Soil, dark loam, clay subsoil. Acres in meadow, 60; in timber, 17, beech, maple and basswood. Acres tillable, 110. Fruit, apples, pears and grapes. Best adapted to corn, potatoes, buckwheat and hay. Fences, barbed wire, poor condition. House, 10 rooms, nearly new. Outbuildings: dairy barn, 30x50 and horse barn, 30x40, good condition. Watered, house and barns by well; fields by brook. Occupied by tenant. Reason for selling, ill health. Price, \$6,000. Terms, \$1,000 down, balance on long time. Address Mrs. Luther Carpenter, owner, Locke, N. Y., R. D. No. 20.

#### TOWN OF THROOP

Population 960

No. 136.—Farm of 100 acres; located  $2\frac{1}{2}$  miles from Auburn P. O.; 2 miles from railway station at Auburn, on line of N. Y. C. and L. V. R. Rs.;  $\frac{3}{4}$  mile from school;  $\frac{1}{4}$  mile from Baptist and Presbyterian churches;  $2\frac{1}{2}$  miles from milk station. Highways, good. Nearest city, Auburn, population 34,668,  $2\frac{1}{2}$  miles distant, reached by highway, 1 mile from city line. Surface of farm, part level, part rolling. Soil, good loam, little clay. Acres in meadow, 20; in natural pasture, 30; in timber, 5, beech and maple; acres tillable, 90. Fruit, 40 apple trees, 15 pear trees, a few plum and crab apple trees. Adapted to all kinds of hay and grain. Fences barbed wire, fair. House 8 rooms. Barns, 34x24 and 34x46. Watered, house and barn, by well; fields, by spring. Four miles from Owasco Lake. Good sand bank on farm. Good dairy farm or a good farm for garden truck. Occupied by tenant, leased for 1 year, with privilege of longer if not sold. Reason for selling, owner lives too far away to handle to advantage. Price, \$6,000.





Terms, \$1,000 cash. Address Lillian R. Arnold, owner, Seneca Falls, N. Y.

## TOWN OF VENICE

Population 1,343

No. 137.—Farm of 105 acres; located 1 mile from Venice Center P. O. and railway station, on line of N. Y. A. & L. R. R.; 4 miles from butter factory; 1 mile from milk condensing plant. Highways, good. Nearest city, Auburn, population, 34,668, 15½ miles distant, reached by rail and highway. Surface, partly level and partly rolling. Altitude, 1,100 feet. Good soil. Acres in meadow, 20; in natural pasture, 30; in timber, 10, beech, maple and basswood; acres tillable, 75. Fruit, apples, peaches, plums and pears. Adapted to all kinds of crops grown in this climate. Fences, wire, board and rail, not very good. House, 39x36, good condition. Outbuildings: barn, 30x90; horse barn, 30x36, cow barn; 2 hen houses; hoghouse. Watered by well and spring. This property is 10 miles from Cayuga Lake; Owasco Lake, 5 miles distant. Reason for selling, advanced age and poor health of owner. Price, \$5,500. Terms, \$2,000, mortgage can remain. Would sell adjoining 80 acres with the 105 described above. There are two sets of buildings, two orchards and small fruits and 18 acres of timber on this property. Will sell both farms for \$9,500. Address

Amos Emory Hutchinson, owner, Venice Center, N. Y.

No. 138.—Farm of 200 acres; located 6 miles from Moravia P. O., R. D. 19; 2½ miles from railway station at Venice Center, on line of Auburn & Ithaca R. R.; ½ mile from school; 2½ miles from Baptist and Methodist churches; 4 miles from Catholic church; 2½ miles from butter factory; 2½ miles from milk station. Highways, good. Nearest city, Auburn, population 34,668, 16 miles distant, reached by rail or highway. Surface of farm mostly level, part slightly rolling. Altitude, 1,200 feet. Soil, good. Acres in meadow, 60; in natural pasture, 25; in timber, 20; acres tillable, 155. Small orchard, mostly apples. Best adapted to oats, barley, wheat, buckwheat, corn and potatoes. Fences, fair condition. Good-sized house in good condition. Hay barn, 80x40; grain barn, 70x34; sheds, horse barn, hogpen, chickenhouse, all in fair condition. Watered, house, by 2 wells; barns, by well; fields, by brook; 5 miles from Owasco Lake, 10 miles from Cayuga Lake. Occupied by tenant. A good, productive farm. Reason for selling, owner lives at a distance from farm and cannot care for it. Price, \$10,000. Terms to suit purchaser. Address Charles A. Karkee, owner, Highland Park, Ky., or Henry M. Jewett, agent, Moravia, N. Y.

## CHAUTAQUA COUNTY

Area, 1,099 square miles. Population, 105,126. Annual precipitation, 39.09 inches. Annual mean temperature, 50.3°. Number of farms, 7,500. Average price of farm land per acre, \$58.38. County seat, Mayville.

Located in the southeast corner of the State bordering on the waters of Lake Erie.

The surface features are mostly hilly and rolling upland. A bluff of 20 or 30 feet elevation extends along the lake front, and from its summit the land spreads out in an undulating region, gradually rising for a distance of three or four miles. This comparatively level tract is bordered by the declivities of a hilly upland which covers the central and southern portions of the county. These uplands are broken by deep valleys. The county is well watered, there being several small lakes in the highlands. The soil of the uplands is principally clay, mixed with disintegrate shale, generally known as flat gravel. In the valleys is found a fine quality of sandy and gravelly loam mixed with alluvium. Along the lake shore is a strip of very productive clay loam. The uplands of the county are all arable to their summits. This is the greatest grape producing county in the United States. The last census shows that 3,582 carloads of grapes, 1,225,000 gallons of grape juice and 750,000,000 gallons of wine were produced on the 35,000 acres of vineyard land. The other leading products are as follows: Corn, 500,850 bushels; oats, 846,513 bushels; buckwheat, 257,341 bushels; barley, 36,392 bushels; wheat, 19,379 bushels; potatoes, 778,277 bushels; hay and forage, 228,907 tons. In respect to livestock the number of farms reporting domestic animals is 6,963, classified as follows: dairy cows, 49,648; horses, 17,363; swine, 20,757; sheep, 14,294; poultry, 325,621. There were produced

23,384,208 gallons of milk. The total receipts for sale of dairy products was \$2,034,455. Valuation of all farm property is given as \$43,738,499, an increase of 41.8 per cent. since 1900.

The county is thoroughly equipped with lines of transportation. There are 277 district schools in the county besides the graded and high schools in the villages. These are all of the same high standing demanded by the State. Churches of all denominations are scattered throughout the county. There are forty agricultural organizations, thirty-six miles of state road and 1,896 miles of improved highway. The county ranks first in grapes, second in currants, and fourth in poultry.

#### TOWN OF ARKWRIGHT

##### Population 848

No. 139.—Farm of 356 acres; located 4 miles from Cassadaga P. O., R. D. 31; 6 miles from railway station at Lacona, on line of D. A. V. & P. R. R.; school across street; 2 miles from churches; 6 miles from milk station; butter factory across street. Highways, somewhat hilly, but good. Nearest large village, Fredonia, population 5,285, 8 miles distant, reached by highway. Surface, hilly. Altitude, about 1,500 feet. Soil, volusia loam. Acres in meadow, 100; in natural pasture, 80; in timber, 120, hemlock, maple and beech; acres tillable, 120. Fruit, 500 apple trees. Best adapted to hay, oats, corn and potatoes. Fences, barbed wire, good condition. New house, 30x40, running water. New barn, 40x60; old barn, 35x75; hogpen, 20x30; henhouse, 15x15, nearly new. Spring piped to trough, then to barn. Over a dozen springs. Farm is 9 miles from Lake Erie. Occupied by tenant. Reason for selling, owner cannot attend to farm. Price, \$10,000. Terms, one-third cash. Address Rosie E. Pierce, owner, care C. D. Sessions, Fredonia, N. Y.

#### TOWN OF BUSTI

##### Population 2,136

No. 140.—Farm of 159 acres; located about 6 miles from Jamestown P. O., R. D. 79, and railway station, line of Erie R. R. and J. C. & L. E. R. R.,  $\frac{1}{2}$  mile from school,  $1\frac{1}{2}$  miles from churches, 3 miles from butter factory, milk wagon passes farm, 8 miles from milk condensing plant. Highways, somewhat hilly. Surface of farm level and rolling. Altitude, 1,500 ft. Soil, clay loam. Acres in meadow, 40; in natural pasture, 50; in timber, 60, beech, maple and hemlock. Acres tillable, 40. Fruit, an old orchard of 50 apple trees, young pear, cherry and plum trees not yet bearing. Best adapted to hay, oats, buckwheat and potatoes. Fences, wire, fair condition. An old farm house with

6 rooms downstairs and 4 upstairs, woodshed attached. Outbuildings, three barns, one 26x30 and two 30x40. Watered, house by first-class drilled well, fields, by spring and stream. Occupied by owner. Reason for selling, owner cannot attend to farm. Price, \$35 per acre. Terms, \$1,500 cash, payments on balance must be completed in 10 years. Will sell adjoining farm of 100 acres, making 259 acres, for \$7,900 cash. Address Eunice E. Tuttle, owner, Jamestown, N. Y., R. D. 79.

No. 141.—Farm of 52 acres; located  $2\frac{1}{2}$  miles from Busti P. O. and 7 miles from railway station at Jamestown on Erie Railroad; 1 mile from school and  $2\frac{1}{2}$  miles from Protestant churches and butter factory. Highways good, somewhat hilly. Nearest city, Jamestown, population 31,297, 7 miles distant. Surface, slightly rolling. Soil, clay loam. Acres in timber, 25, beech and maple. Fruit, 140 apple trees, different varieties, some pears and grapes. Fences, wire, good condition. House, 10 rooms. Outbuildings, ample for farm. Watered, house, by well and cistern; barns, by running water. This farm is 4 miles from Chautauqua Lake. Price, \$5,000. Address S. O. Smith, owner, 22 Derby St., Jamestown, N. Y.

No. 142.—Farm of 100 acres; located 6 miles from Jamestown P. O., R. D. 79, and railway station, on line of Erie, J. C. & L. E. and D. A. V. & P. Railroads,  $1\frac{1}{2}$  miles from churches;  $\frac{1}{2}$  mile from school; 3 miles from butter factory; milk wagon passes door; 8 miles from milk condensing plant. Highways, somewhat hilly. Surface of farm level and slightly rolling. Altitude, about 1,500 ft. Soil, clay loam. Acres in meadow, 40; in natural pasture, 50; in timber, 10. Acres tillable, 40. Fruit, an old apple orchard of about 25 trees. Best adapted to hay, oats, buckwheat, etc. Fences, wire, fair. House, 2 stories, 32x28, needs some repairs. Outbuildings, henhouse, barn 30x40, fair condition. Watered by well, springs and stream. Reason for

selling, owner cannot attend to farm. Price, \$35 per acre. Terms, \$1,500 cash, payments on balance must be completed in 10 years. A liberal discount will be made for cash. Address Eunice Tuttle, owner, Jamestown, N. Y., R. D. 79.

## TOWN OF CARRELL

Population 1,564

No. 143.—Farm of 93 acres;  $\frac{3}{4}$  mile north from Frewsburg P. O., R. D. 84, on line of D. A. V. & P. R. R.; 1 mile from station;  $\frac{1}{2}$  mile from school;  $\frac{5}{8}$  mile from Methodist church and 4 other churches. Highways, good, level roads.  $5\frac{1}{2}$  miles from Jamestown, population 31,297, reached by rail and highway. Occupied by owner. Surface, level. Soil, mostly gravelly loam, little clay. Acres in meadow, 61; in natural pasture, 30. Some wood in pasture; have sold a quantity of hemlock and pine timber, but have reserved enough for use of farm. About 40 apple trees. Best adapted to oats, corn, wheat, barley, buckwheat, potatoes, etc. Fences, mostly barbed wire, good condition, some woven wire. House, upright, 16x26; S. L., 18x26; E. L., 16x20; 10 rooms. Horse barn, 30x40; cow barn, 40x44; in good condition. House watered by well; barns, by well; fields, by two brooks and a spring. Conewango Creek forms the northwest boundary of farm. Frewsburg is a thriving little village in which are 4 sawmills and 1 canning factory. The Jamestown & Warren trolley runs through the village. The Delaware & Eastern R. R. will soon run within 3 miles of the farm to Gilboa, a town of 250 inhabitants, where there will be a depot. Farm is beautifully located. Price, \$75 per acre. Terms, 2/3 or more cash, balance on bond or mortgage. Reasons for selling, owner a widow and in poor health. Name and address of owner, Mrs. R. C. Dingley, Frewsburg, N. Y.

No. 144.—Farm of 102 acres; located  $4\frac{1}{2}$  miles from Frewsburg P. O., and railway station, on line of D. A. V. & P. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches;  $\frac{1}{4}$  mile from butter factory;  $4\frac{1}{2}$  miles from milk station and condensing plant. Highways, good. General surface slightly rolling. Nature of soil, loam. Acres in timber, 10, beech, birch, maple, etc. Acres tillable, 90. Fruit, 100 apple trees, of different va-

rieties. Best adapted to corn, wheat, potatoes, oats, clover and timothy. Fences, wire and rail, good condition. House, 18x30, with ell, 15x29, good condition. Outbuildings, basement barn, 40x45, concrete floor, silo; horse barn, 30x40; carriage barn, 26x32, with hay loft. House, watered by well; barns, by springs, and fields, by springs. Occupied by owner. Reason for selling, old age. Price, \$5,250. Terms on application. Address S. G. Anderson, owner, R. D., Frewsburg, N. Y., or D. C. Strong, broker, Jamestown, N. Y.

## TOWN OF CHARLOTTE

Population 1,258

No. 145.—Farm of 100 acres; located  $4\frac{1}{2}$  miles from Sinclairville, P. O., R. D. 40; 5 miles from railway station at Sinclairville, on line of D. A. V. & P. R. R.;  $1\frac{1}{4}$  miles from school; 2 miles from Methodist church;  $\frac{1}{2}$  mile from butter factory; 5 miles from milk station. Highways, good. Nearest city, Jamestown, population 31,297, 16 miles distant, reached by rail and highway. Surface, level. Soil, yellow loam, dark loam and gravel. Acres in meadow, 40; in natural pasture, 40; in timber, 20, maple; acres tillable, 80. Fruit, apples, pears, plums, cherries, currants, strawberries and raspberries. Best adapted to grass, oats, barley, corn, potatoes, cabbage, buckwheat and millet. Fences, woven wire. Good house, nearly new, 15 rooms. Outbuildings, new; cow barn, 42x60; horse barn, 30x40; henhouse, 16x50; storehouse, 20x28; sugar house; 3 sheepbarns, one, 12x38, one, 12x45, and one, 18x15. Watered by well and springs. This property is 14 miles from Chautauqua Lake. Occupied by owner. Reason for selling, advanced age of the owner. Price, \$5,500. Terms, \$3,000 cash, balance on mortgage. Address S. B. Irwin, owner, Sinclairville, N. Y. Owner will rent.

## TOWN OF CHAUTAUQUA

Population 3,515

No. 146.—Farm of 47 acres; located  $\frac{1}{2}$  mile from Mayville P. O.; 1 mile from railway station at Mayville, on line of Penn. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{2}$  mile from Presbyterian, Lutheran and Methodist churches; about 3 miles from butter factory;  $\frac{1}{2}$  mile from milk station. Highways, good. Nearest large village, Mayville, population, 1,122,

reached by highway or trolley. Surface, rolling; easy grade; can all be worked. Soil, good. Acres in meadow, over 20; in natural pasture, about 20; in timber, about 7, beech, maple. Acres tillable, 30. Fruit, 50 apple trees, 150 grapevines (a good farm for grapes). Best adapted to hay and grain. Fences, wire and rail. House, 1½ stories, 1 story wing; 12 rooms. Six buildings on farm; horse barn, 22x30, in fair condition; cow barn, large enough for 8 head of cattle; hen house, 1½ stories; hall, 24x40, 2 stories; building, 1½ stories. House watered by pump in kitchen; barns from house. One mile from Chautauqua Lake. Highways on two sides of farm, trolley car on highway in front of house. Can have natural gas for fuel. Occupied by tenant. Reason for selling, owner has other business. Price, \$4,000. Terms, whole or half cash, balance on mortgage. Name and address of owner, M. F. Jacobsen, 501 East 6th Street, Jamestown, N. Y.

No. 147.—Farm of 60 acres; located 5 miles from Mayville P. O., 4 miles from railway station at Sherman, on line of Penn. R. R.; ¾ mile from school; 1½ miles from churches; 5 miles from butter factory; 5 miles from cheese factory; 4 miles from milk station and condensing plant. Highways, good. General surface, rolling. Altitude, 1,500 feet. Nature of soil, gravel and black loam. Acres that can be used as meadow, 40; in natural pasture, 10; in timber, 10, beech, hemlock, 200 maple, cherry, second growth. Acres tillable, 40. Fruit, 100 apple trees, Spies, Baldwins, early varieties, pears, cherries and plums. Best adapted to corn, hay, oats and potatoes. Fences, rail and wire, good condition. House, 10 rooms, good condition. Outbuildings: barn, 26x38; cow barn, 24x38; horse barn; poultry house, 12x16; hog house, 12x20, tool shop, 12x20, all in good condition. House watered by well and cistern; barns by well, and fields by well. Chautauqua Lake, 4 miles distant. Occupied by tenant. Reason for selling, other business. Price, \$2,500. Terms, \$1,000 cash, balance on mortgage at 5%. Address, J. L. Smith, owner, Sherman, N. Y., or W. J. Bement, broker, Sherman, N. Y. Owner will rent with option to buy.

No. 148.—Farm of 133 acres; 2 miles from Hartfield P. O., R. D. 44, and railway station at Hartfield on line of

Chautauqua Lake R. R.: ½ mile from school, 2 miles from Union, Christian and Episcopal churches; 1 mile from cheese factory. Highways, good, but hilly. Nearest village, Mayville, population, 1,122, distant 4 miles, reached by highways. Surface, pastures hilly, meadows level and rolling. Soil, black loam. Acres in meadow, 45; in natural pasture, about 55; in timber, 30 to 40, beech, maple, ash, basswood and cherry. Acres tillable, about 100. Fruit, a large number of apple trees, choice varieties, a few fine pear trees, few peaches and other fruit. Best adapted to grass, corn, oats, etc. Fences, a few rail, the rest wire, in fair condition. House upright, 32x25; wing, 18x50. Outbuildings: barn, 40x50; stable, 40x50; horse barn, 25x30; corn barn, 20x20; all in good condition. Watered, house by well; barns and fields by spring and streams. Chautauqua Lake, 2 miles away. This farm is well watered, lying in a sheltered location with excellent timber and buildings in good condition. Occupied by owner. Reason for selling, this property is owned and occupied by a widow and her daughter, who cannot conduct farm. Price, \$40 per acre. Terms, one-half cash, balance on mortgage. Address, M. L. Mallery, owner, Hartfield, N. Y.

No. 149.—Farm of 200 acres; located 2 miles from Hartfield P. O., R. D. and railway station on line of Jamestown and Chautauqua R. R.; 1 mile from school; 2 miles from churches; 2 miles from milk station and condensing plant. Nearest village, Mayville, county seat, population, 1,122, 3 miles distant, reached by rail or highway. General surface, level, some side hill. Acres in meadow, 150; in pasture, 50; some timber, maple, beech, ash and elm. Acres tillable, 150. Fruit, orchard of 60 trees. Best adapted to corn, oats and potatoes. Fences, wire, good condition. House, poor condition, but livable. Outbuildings, large barn, small barn, 2 silos. House, watered by well, fields by brook and springs. View of Chautauqua Lake from house. Occupied by tenant. Possession given at any time. Reason for selling, owner in other business. Price, \$8,000. Terms, \$3,000 down. Address, H. J. Putnam, owner, Fredonia, N. Y.

#### TOWN OF ELLERY

Population 1,695

No. 150.—Farm of 215 acres; located 2½ miles from Sinclairville P. O., R. D.

16 and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches; 2 miles to butter factory;  $1\frac{1}{2}$  miles to cheese factory; 2 miles to condensing plant. Highways, good. Nearest city, Jamestown, population, 31,297, 8 miles distant, reached by rail and highway. General surface of farm, level. Altitude, 1,200 feet. Acres in meadow, 100; in pasture, 90; in timber, 25, hardwood and hemlock. Acres tillable, 125. Fruit, good apple orchard. Best adapted to corn, oats, wheat and hay. Fences, good wire. House, 12 rooms, good condition. Outbuildings: 3 good barns. House watered by running water; barns by running water; fields by brooks. Occupied by tenant, leased annually. Price, \$50 per acre. Terms, to suit purchaser, small cash payment. Address, H. L. Ames, owner, Falconer, N. Y. Will rent.

## TOWN OF FRENCH CREEK

Population 882

No. 151.—Farm of 209 acres; located 7 miles from Clymer P. O., R. D. 58, and railway station on line of Pennsylvania R. R.;  $\frac{1}{4}$  mile from school;  $3\frac{1}{2}$  miles from churches;  $3\frac{1}{2}$  miles from butter factory; 5 miles from cheese factory. Nearest city, Erie, Pa., population 75,000, 23 miles distant, reached by highway or rail. General surface, north slope. Altitude, 1,350 feet. Nature of soil, gravel and loam. Acres in meadow, 140; in timber, 70, beech, maple, elm, basswood and hemlock. Acres tillable, 140. Fruit, 35 apple, pear and prune trees, two years old. Best adapted to hay, wheat, barley, rye, oats, potatoes, beans and buckwheat. Fences, woven and barbed wire, board and rail. House, 28x32, with wing, 16x24, very good condition. Outbuildings, barn, 50x59, with basement stable for 36 head of cattle; horse barn, 30x40; hog house; poultry house. House watered by well in house; well in horse barn; fields by springs and brook; French Creek bounds farm on the north. Occupied by owner. Reason for selling, advanced age of owner. Price, \$7,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Charles W. Kennedy, owner, Clymer, N. Y.

No. 152.—Farm of 1318 acres; located 2 miles from French Creek P. O.;  $3\frac{1}{2}$  miles from railway station at Clymer on line of Pennsylvania R. R.; 2 schools and churches on place;  $3\frac{1}{2}$  miles from

butter and cheese factory and milk station. Highways, State brick paved. Nearest city, Corry, Pa., population 10,000, 6 miles distant, reached by highway. General surface, level; slopes to French Creek, which is in center. Altitude, 1,500 feet. Nature of soil, gravelly clay and dark loam. Acres in meadow, 500; in pasture, 300; 200,000 feet of timber, mostly hardwood. Fruit, 200 apple trees. Best adapted to general farm crops, hay and potatoes. Fences, all kinds, except stone. Houses, 5 dwellings, 1 large brick mansion, all improvements; 3 tenant houses. Saw mill, feed mill, store, etc. 5 barns, 1 big modern barn, 60x100, accommodations for 155 cows; silo, etc. House and barns watered by running water; fields by springs and stream. French Creek and Cutting Brook run through place. Occupied by owner. Reason for selling, ill health. Price, \$65,000. Terms, \$30,000 cash, balance on mortgage at 5%. Address B. E. Cartwright, owner, Ferry St., Buffalo, N. Y., or C. C. Grien & Co., brokers, 200 Pearl St., Buffalo, N. Y.

## TOWN OF HANOVER

Population 5,670

No. 153.—Farm of 200 acres; located 5 miles from Forestville P. O. and 3 miles from railway station at Smith's Mills, on line of Erie R. R.;  $1\frac{1}{16}$  mile from school;  $\frac{1}{2}$  mile from Protestant churches;  $\frac{1}{2}$  mile from cheese factory; 3 miles from milk station, and 6 miles from powdered milk factory. Highways, good. Nearest city, Dunkirk, population 17,221, 14 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,100 feet. Soil, loam. Acres in meadow, 80; in natural pasture, 75; in timber, 45, maple, hemlock and beech; acres tillable, 150. Fruit, 50 apple trees. Adapted to grain of all kinds, grass and grapes. Fences, wire, in good condition. House, 2 story, 35x35, good condition. Outbuildings, large barn, 50x40, with silo and shed; barn, 35x40; barn, 20x30, all in good condition. Watered, house, by well; barns and fields, by springs. This farm is 7 miles from Lake Erie. Occupied by tenant. Reason for selling, to settle an estate. Price, \$60 per acre. Terms, 40% cash, balance on time. Address J. L. Hurlbert, executor, 18 East Second St., Dunkirk, N. Y.

No. 154.—Farm of 197 acres; located 3 miles from Forestville P. O., R. D.,

and railway station, on line of Erie R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches of all denominations;  $\frac{1}{4}$  mile from cheese factory; 3 miles from milk station; 6 miles from powdered milk factory. Highways, good. Nearest city, Dunkirk, population 17,221, 11 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 80; in natural pasture, 80; in timber, 35, maple, hemlock and beech. Acres tillable, 160. Fruit, 50 apple trees. Best adapted to grapes, hay and grain. Fences, wire, in good condition. House, 35x30, 1 $\frac{1}{2}$  stories, in fair condition. Outbuildings, large barn, with silo, 70x40; hay barn, 25x30; cow barn, all in good condition. Watered, house, by well; barns by running water; fields, by springs. This farm is 7 miles from Lake Erie. Occupied by tenant. Reason for selling, to settle an estate. Price, \$50 per acre. Terms, 40% down, balance on time. A State highway will be built near this farm in 1915. Address J. R. Hurlbert, executor, 18 East Second St., Dunkirk, N. Y.

#### TOWN OF HARMONY

Population 2,847

No. 155.—Farm of 320 acres; located 7 miles from Ashville P. O., R. D. 64; 5 miles from railway station at Chautauqua, on line of J. C. & L. E. R. R.; 1 mile from school;  $\frac{1}{4}$  mile from Methodist church; 2 miles to other churches; 2 miles from milk station, 6 $\frac{1}{2}$  miles from milk condensing plant and powdered milk factory. Highways, good. Nearest city, Jamestown, 12 miles distant, population, 31,297, reached by trolley and highway. Surface of farm, slightly rolling. Altitude, about 1,500 feet. Soil, loam and gravel, clay subsoil. Acres in meadow, 70; in natural pasture, 50; in timber, 70, mostly beech and maple. Acres tillable, 200. Fruit, 250 apple trees, 3 pear and 2 plum trees. Best adapted to hay, grain, wheat, oats and buckwheat. Fences, mostly wire, some rail, good condition. House, 10 rooms, needs slight repairs. Outbuildings, barn, 60x30; wing, 48x50; two other barns, 30x40, good condition; shop, 18x30, good condition; 4 smaller buildings. Watered, house and barn, by well; fields, by living springs. This farm is 3 miles from Lake Chautauqua and trolley. Occupied by owner. Reason for selling, ill health of owner. Price, \$30 per acre. Terms,

cash or part cash. Address R. M. Hutchinson, owner, Ashville, N. Y., R. D. 64.

No. 156.—Farm of 153 $\frac{1}{2}$  acres; located 4 miles from Clymer P. O., R. D. 61; 4 miles from railway station at Panama, on line of Penn R. R.; also 5 miles from Bear Lake on Erie R. R.; 1 mile from school; 1 $\frac{1}{2}$  miles from Free Baptist; 3 $\frac{1}{2}$  miles from Methodist and Baptist churches; 3 $\frac{1}{2}$  miles from butter factory; 3 $\frac{1}{2}$  miles from cheese factory; 4 miles from milk station; 10 miles from condensing plant. Highways, good. Nearest village, Panama, population, 337, 3 $\frac{1}{2}$  miles distant, reached by highway. Surface of farm, part rolling.  $\frac{2}{3}$  level. Soil, loam and gravel. Acres in meadow, 30; in natural pasture, 70; in timber, 30, beech, maple, ash, hemlock and basswood. Acres tillable, 70. Fruit, 125 apple trees. Best adapted to grass. Fences, rail and wire, in good condition. House, 32x28, in good condition. Barn, 62x47; barn, 60x40; hog pen, 16x24; hen house, 16x12; milk house, 12x18; shop, 16x24; wood house, 16x24. House, watered by spring; barns by creek, and fields by creek; 12 miles from Lake Chautauqua. Occupied by tenant. Reason for selling, owner too old to work the farm. Price, \$3,750. Terms, \$1,000 cash, mortgage for balance at 4%, with yearly payments. Name and address of owner, John Emory, Panama, N. Y. Owner will rent for cash or with option to buy.

No. 157.—Farm of 50 acres; located 2 miles from Niobe P. O., R. D. No. 62, and railway station, on line of Erie R. R.; 2 miles from school; 2 miles from church; 5 miles from butter factory; 2 miles from cheese factory and milk station. Highways, good. Nearest city, Jamestown, population 31,297, 15 miles distant, reached by rail and highway. General surface, rolling and level. Nature of soil, gravel. Acres that can be used as meadow, 35; in natural pasture, 25; in timber, 2. Acres tillable, 35. Fruit, 1 small orchard of 50 trees. Best adapted to hay, oats, corn and potatoes. Fences, wire and rail, good condition. House, large double, lately remodeled at an expense of \$600. Large basement barn, 35x55, good condition. House watered by well and running spring; barns by spring, and fields by springs. Occupied by owner. Reason for selling, to settle an estate. Price, \$1,900. Terms \$1,200 cash, balance on mortgage. Poul-

try house, 14x80 feet, and hog house. Address S. C. Cornish, owner, Niobe, N. Y.

No. 158.—Farm of 320 acres; located 2 miles from Stedman P. O.; 3 miles from railway station at Chautauqua, on line of J. C. & L. E. Ry.; 1 mile from school;  $\frac{3}{4}$  mile from churches; collect milk at door; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from milk station. Highway, good. Nearest city, Jamestown, population, 31,297, distant 12 miles, reached by rail and highway. General surface of farm, slightly rolling. Altitude, 1,325 feet. Nature of soil, sandy loam. Acres in pasture, 15; in timber, 75, maple; 100,000 feet of saw lumber. Acres tillable, 100. Fruit, 6 acres of apple orchard, 250 trees, Baldwins, Greenings, and others; few pears, plums, quinces, currants and blackberries. Best adapted to general farming, hay, grain, potatoes, beans and corn. Fences, wire and rail, in fair condition. House, frame,  $1\frac{1}{2}$  stories, 10 rooms, wing to house, veranda and good cellar. Barn, 58x24, with basement; milk house, 18x30; 2 barns, about 40x60, 50x46; 2 hog houses; 1 shop. Watered, house by 4 dug wells; barns by 2 springs; fields by 2 streams. Occupied by tenant. Price, \$9,600. Terms, \$3,500 mortgage at 5%, balance cash. Woods contain sugar bush and living springs. Farm can be divided into two farms. Markets, Mayville, Chautauqua, Jamestown and Sherman. Address R. M. Hutchinson, owner, Stedman, N. Y., R. F. D.

No. 159.—Farm of 113 acres; located  $4\frac{1}{2}$  miles from Sherman P. O.; 4 miles from railway station, on line of Penn. R. R.;  $\frac{3}{4}$  mile from school;  $4\frac{1}{2}$  miles from churches; 5 miles from butter factory; 7 miles from cheese factory; 8 miles from milk station, and  $4\frac{1}{2}$  miles from condensing plant. Highways, good. General surface, rolling. Altitude, about 1,500 feet. Nature of soil, dark loam, with clay subsoil. Acres that can be used as meadow, 50; in natural pasture, 25; in timber, 38, beech, ash, elm, hemlock, and 1,000 sugar maples. Acres tillable, 65. Fruit, 200 apple trees, pears, plums, cherries, currants and berries. Best adapted to corn, hay, oats, barley, potatoes and peas. Fences, wire and rail, good condition. House, 10 rooms, good condition. Outbuildings, cow barn, 40x44; horse barn, 28x38; silo, 10x26; poultry house, 18x60; hog house, tool house and sugar house. House, watered

by well and cistern; barns, by well; fields, by springs and creek. Chautauqua Lake, 5 miles distant. Occupied by owner. Price, \$3,800. Terms, \$2,000 cash, balance on mortgage at 6%. Address Lucy Eggleston, owner, Sherman, N. Y., or W. J. Bement, broker, Sherman, N. Y.

#### TOWN OF POLAND

Population 1,447

No. 160.—Farm of 223 $\frac{1}{2}$  acres; located 4 miles from Frewsburg P. O., R. D. 84; 3 $\frac{1}{2}$  miles from railway station at Falconer Junction, on line of Erie & D. A. V. & P. R. R.; 80 rods from school; 3 miles from churches; 4 miles from butter factory; 3 miles from milk station; 4 miles from condensing plant. Highways, good. Nearest city, Jamestown, population, 31,297, distant 6 miles, reached by highway and trolley. Surface of farm, meadows and upland. Soil, excellent. Acres in meadow, 100; in natural pasture, 123. Acres tillable, 100. Fruit, 30 trees. Adapted to almost all kinds of crops. Fences, wire and stumps. Houses, 2, in fair condition. Barns, 4 barns and outbuildings. Watered, house, by pipes from spring; barns, by pipes from springs, and fields, by creek. Chautauqua Lake, 7 miles from farm. Conewango Creek runs through meadows. Occupied by tenant. Tenant's lease includes agreement of release in case of sale of farm. Reason for selling, owner living at a distance too great to look after the farm personally. Price, \$10,000. Terms, part cash, balance on mortgage if desired. Terms to be agreed upon. Address A. D. Betts, owner, Downing Avenue, Newburgh, N. Y. Owner will rent with option to buy.

#### TOWN OF PORTLAND

Population 3,058

No. 161.—Farm of 30 acres; located  $1\frac{1}{4}$  miles from Brocton P. O. and shipping station on line of P. & E. R. R.;  $1\frac{1}{4}$  miles from school and Protestant churches. Highways, level, well graded roads. Nearest large villages, Brocton, population, 1,181, and Dunkirk, 9 miles, population, 17,221, reached by railroad and trolley. Surface of farm, level. Soil, gravel loam. Acres in meadow, 7. All tillable. Fruit, 15 acres of grapes. Adapted to fruits or general farm crops. House, 7 rooms, good condition. Basement barn, 26x36, new roof, concrete floor, good condition. Watered, by well. This farm is 2 miles from Lake Erie.

Unoccupied. Reason for selling, owner has two farms. This farm lies on both sides of the road, has fine maple drive the entire length. The trees are large and beautiful, 140 of them can be tapped. Price, \$5,500. Terms, cash \$3,000, balance on easy terms. Address Wm. Walden, owner, Brocton, N. Y.

## TOWN OF SHERMAN

## Population 1,568

No. 162.—Farm of 247½ acres; located 1 mile from Sherman P. O. and railway station on line of Penn. Ry.; 1 mile from high school; 1 mile from Methodist, Baptist and Presbyterian churches; 1 mile from butter factory; 1½ miles from condensing plant. Highway, in good condition. Nearest village, Sherman, population 836, reached by highway. General surface of farm, level and sloping. Nature of soil, loam and clay subsoil. Acres in meadow, 30; in pasture, 100; in timber, 25, basswood, ash, cherry and maple; acres tillable, 150. Fruit, 20 apple, 5 cherry and 2 plum trees. Best adapted to corn, hay, oats and potatoes. Fences, wire, in good condition. House, 12 rooms, hot and cold water, bath room, in good condition. Outbuildings, 40x150 with basement, large silo. Watered, house by running water; barns, same; fields by creek. Chautauqua lake 9 miles away. Occupied by tenant. Price, \$18,000. Terms, \$7,000 cash, 5% mortgage, easy payments. Farming tools and 35 cows go with farm. Address, W. J. Bement, owner, Sherman, N. Y.

No. 163.—Farm of 66 acres; located 5 miles from Sherman P. O.; 2½ miles from railway station at No. Clymer, on line of Pennsylvania R. R.; ½ mile from school; 1 mile from churches; 6 miles from butter factory; 8 miles from cheese factory; 8 miles from milk station and 5 miles from condensing plant. Highways, good. General surface, slightly rolling. Altitude, 1,400 feet. Nature of soil, good clay loam. Acres that can be used as meadow, 60; in timber, 6, 2nd growth of beech, maple and hemlock. Acres tillable, 60. Fruit, 200 trees, Spies, Baldwins, Greenings, early varieties; 8 pear, 40 cherry, 10 plum, 11 prune and 3 quince trees; 18 grape vines, strawberries and raspberries. Best adapted to corn, hay, oats, potatoes and peas. Fences, rail and wire, in good condition. House, 10 rooms, good condition. Outbuildings, basement barn,

36x64; silo, 12x28, and sugar house. House, watered by well and cistern; barns, by well, and fields, by springs and creek. Occupied by owner. Reason for selling, desires a smaller place. Price, \$3,200. Terms, \$2,000 cash, balance on mortgage at 5%. Address E. I. Gibbs, owner, No. Clymer, N. Y., or W. J. Bement, broker, Sherman, N. Y.

No. 164.—Farm of 150 acres; located 4 miles from Sherman P. O.; 3 miles from railway station at North Clymer, on line of Penn. Ry.; ¼ mile from school; 2½ miles from churches; 4½ miles from butter factory; 2½ miles from milk station; milk called for. Highway, good. Nearest village, Sherman, population 836, reached by highway. General surface of farm, level. Nature of soil, loam. Acres in pasture, 50; in timber, 10, pine, oak and elm. Acres tillable, 100. Fruit, 20 apple, also cherry trees. Best adapted to hay, oats, corn and potatoes. Fences, in good condition. Outbuildings, cow barn, 40x100, with basement, 20 stanchions; horse barn, 20x30. Watered, house by well; barns by well; fields by creek. Price, \$2,000. Terms, \$500 cash, \$100 yearly, 5%. Address J. W. Newell, executor of estate, Lima, Ohio, or W. J. Bement, broker, Sherman, N. Y.

No. 165.—Farm of 150 acres; located 1 mile from North Clymer P. O. and railway station, on line of Penn. Ry.; 1½ miles from school; 1 mile from churches; 6 miles from butter factory; 1 mile from milk station; 5 miles from condensing plant; milk called for. Highways, in good condition. Nearest village, Sherman, population 836, distance 5 miles, reached by rail and highway. General surface of farm, level and sloping. Nature of soil, loam. Acres in timber, 20, elm, ash, maple. Acres tillable, 100. Best adapted to hay, oats, corn and potatoes. Fences, in good condition. House, 13 rooms, in good condition. Outbuildings, cow barn, 34x40, and 42x50; horse barn, 26x40; hen house, 15x32; buildings in fair condition. Watered, house, barns and fields by springs. Findley Lake 10 miles distant. Occupied by tenant. Price, \$3,250. Terms, \$1,000 cash, \$100 upwards yearly, 5%. Address W. Chapman, owner, R. D., North Clymer, N. Y., or Wm. J. Bement, broker, Sherman, N. Y.

No. 166.—Farm of 234 acres; located 4½ miles from Sherman P. O. and railway station, on line of Penn. Ry.; ¼ mile from school; ¼ mile from Bap-



FIG. 260.—VIEW ON FARM NO. 160, TOWN OF HYDE PARK,  
DUTCHESS COUNTY.



FIG. 261.—HOUSE ON FARM 120, TOWN OF SEMPRONIUS, CAYUGA COUNTY.





tist church;  $4\frac{1}{2}$  miles from condensing plant; milk called for. Highway, level. Nearest village, Sherman, population 336, reached by highway. General surface of farm, level and rolling. Nature of soil, gravelly and black loam. Acres in pasture, 75; timber, 55, first growth, beech, maple, hemlock, oak. Acres tillable, 150. Fruit, 50 apple, 5 plum and cherry trees. Best adapted to corn, oats, hay and potatoes. Fences, wire, in good condition. House, 10 rooms, in good condition. Barns, outbuildings, 45x100, good condition. Watered, house by well; barns by well; fields by spring and creek. Chautauqua Lake 10 miles distant. Occupied by tenant. Reason for selling, old age. Price, \$7,400. Terms,  $\frac{1}{2}$  down, balance easy terms, 5%. Address Carlos Stebbins, owner, Sherman, N. Y., or W. J. Bement, broker, Sherman, N. Y.

No. 167.—Farm of 261 acres; located  $3\frac{1}{2}$  miles from Sherman P. O. and railway station, on line of Penn. Ry.;  $\frac{1}{2}$  mile from school;  $3\frac{1}{2}$  miles from Methodist, Baptist and Presbyterian churches;  $3\frac{1}{2}$  miles from condensing plant; milk called for. Highway, good. Nearest village, Sherman, population 336, reached by highway. General surface of farm, rolling and level. Nature of soil, black and clay loam. Acres in meadow, 100; in pasture, 100; in timber, 61, 1st and 2nd growth. Acres tillable, 150. Fruit, 150 apple trees. Best adapted to corn, oats, hay and potatoes. Fences, wire, in good condition. House, 8 rooms, spring water piped to house, cellar, in good condition. Barns, 56x120, with basement, ventilation, spring water piped to barn; all in good condition. Fields watered by springs and creek. Lake Erie 8 miles away; 9 miles from Chautauqua Lake. Occupied by owner. Reason for selling, poor health. Price, \$10,500. Terms,  $\frac{1}{2}$  cash, balance easy terms, 5%. Address Homer Rater, owner, R. D., Ripley, N. Y., or W. J. Bement, broker, Sherman, N. Y.

## TOWN OF WESTFIELD

Population 4,481

No. 168.—Farm of 105 acres; located 2 miles from Westfield P. O., R. D. 24;  $1\frac{1}{2}$  miles from railway station at Westfield, on line of Lake Shore Ry.; 2 miles from school and churches. Surface of farm, slightly rolling. Altitude, 550 feet. Soil, clay loam. Acres in meadow, 12; in natural pasture, 20; in timber, 12,

mostly small hardwood. Acres tillable, 75. Fruit, about 125 apple trees, 25 acres of grapes, a few pear trees. Best adapted to fruit, corn, grass, oats and wheat. Fences, mostly rail and wire, poor condition. House, 22x32, with ell 18x24; wood shed, 12x20, fair condition. Outbuildings, barn, shed, packing house, 2 stories. Watered by well, creek and lake. This farm borders on Lake Erie. Occupied by tenant. Price, \$140 per acre. Terms, cash or part cash. Address M. A. Wilson, owner, 9 First St., Westfield, N. Y. Owner will rent.

No. 169.—Farm of 90 acres; located 4 miles from Westfield P. O.;  $\frac{1}{4}$  mile to station Ripley, on line Lake Shore Ry.; school next to farm; 3 miles from Catholic and Protestant churches, with trolley and State road. Nearest city, Dunkirk, 22 miles distant, population 17,221, reached by rail and trolley. Surface of farm, level but well drained. Altitude, about 700 feet. Soil, sandy and clay loam. Acres in meadow, 15; in natural pasture, 10; all tillable. Fruit, 50 acres of grapes. Adapted to fruit and berries. House, large, fair condition. Outbuildings, large. Watered by well. Lake Erie about  $\frac{1}{2}$  mile from house. Occupied. Reason for selling, owned by Welch Grape Juice Company, and for sale because they have decided to do no more farming. Price, \$160 per acre. Terms,  $\frac{1}{2}$  cash. Address Welch Grape Juice Company, owners, Westfield, N. Y.

No. 170.—Farm of 25 acres; located in Westfield, on line of Lake Shore Ry. Surface of farm, level. Soil, gravel loam, 5 acres in meadow, all tillable. Fruit, 9 acres of grapes,  $1\frac{1}{2}$  acres of cherries, large tract of currants, red raspberries, pears, peaches, apples, strawberries and grapes. Best adapted to fruit and berries. House, modern, 14 rooms, electric and gas light, bath, furnace and all conveniences; 3 minutes' walk from trolley. Outbuildings, good barn, electric lights, also cow barn, hen house, etc. Watered, house and barn by city water. Lake Erie 1 mile distant. Occupied by owner. Reason for selling, advanced age and ill health of owner. Price, \$16,500. Terms,  $\frac{1}{2}$  cash or more. Address A. H. Harris, owner, Westfield, N. Y.

No. 171.—Farm of 180 acres; located 5 miles from Sherman P. O.; 4 miles from railway station at Ripley Crossing, on line of Lake Shore and M. S. R. R.;  $\frac{1}{4}$  mile from school; country churches nearby; milk wagon passes farm; 3 to 5 miles from cheese factories. Good soil,

very few stones. About  $\frac{1}{2}$  of farm tillable,  $\frac{1}{2}$  in natural pasture and timber, mostly hardwood. Fruit, part old and part new orchard, variety of trees. Best adapted to general farm crops. Fences mostly barbed wire. Large roomy farm house with two verandas. Outbuildings, barn 40x100 with addition; modern barn with silo; 100 ton hay barn; granary; basement stables. Watered by well, spring and creek. Cement milk house with drilled well; drilled well in barn with windmill, also gasoline pumping outfit in milk house. Occupied by tenant. Reason for selling, owner retiring from business. Price, \$6,500. Terms, safe payment down. Address Hermon L. Kent, owner, 72 South Portage Street, Westfield, N. Y.

No. 172.—Fruit farm of 24 acres; located about 1 mile from Westfield P. O. and railway station, on line of Lake

Shore and Chicago and St. Louis R. R. and near Chautauqua & Lake Erie R. R., the leading grape station, also Chautauqua Traction Co. and Buffalo and Lake Erie Traction Co.'s lines. Center of the Chautauqua and Erie Grape Belt. Fine churches and public schools, near Dunkirk, Erie and Buffalo, about  $1\frac{1}{2}$  miles from Lake Erie; 8 miles from Chautauqua Lake. The land for sale consists of about 16 acres of grapes, 3 acres of meadow, balance pasture. Has large red grape packing house which could be converted into a residence if desired or owner could live in town and work the place. Price, \$4,500. Terms, safe payment down, balance, liberal time if desired. Reason for selling, owner is retiring from business and has several other places. Address Hermon L. Kent, owner, 72 South Portage St., Westfield, N. Y.

### CHEMUNG COUNTY

Area, 513 square miles. Population, 54,662. Annual precipitation, 33.74 inches. Annual mean temperature, 50.9°. Number of farms, 2,193. Average price of farm, land per acre, \$33.56. The value of all farm property is \$10,288,587. This is a remarkably low price for good farm land. That the farmers of this county are prosperous is proved by an increase in the value of farm buildings of nearly \$700,000 during the last ten years.

This is a lower tier county bordering on Pennsylvania and one of the smaller counties of the State.

The surface is uneven and rolling, in some places rising in considerable mountains. The country along the river banks is level and alluvial and those flats are in some places extensive and exceedingly fertile. There is considerable timber on the more mountainous portions of the county. It is well watered by springs, creeks, ponds and the Chemung river. Along the broad valley of this river tobacco is extensively grown, producing more of that material than any other area of its size in the State. There are several streams tributary to the Chemung river whose valleys are now bordered by steep hills with a soil and gravelly loam intermixed in some places with clay. There are ample markets for all products of the county and the trunk lines of transportation give easy access to inexhaustible markets both in New York and Pennsylvania.

The leading crops are as follows: Corn, 106,999 bushels; oats, 253,138 bushels; buckwheat, 188,079 bushels; potatoes, 370,110 bushels; hay and forage, 51,053 tons; tobacco 2,903,700 pounds. Domestic animals are as follows: dairy cows, 11,035; horses, 5,421; swine, 4,099; sheep, 7,000; poultry, 92,712; total receipts for dairy products, \$521,565; amount of milk produced, 5,539,750 gallons. There are 111 district schools, a college located at Elmira, where is also one of the New York State reformatory institutions and the Erie Railroad car shops which employ a large number of workmen.

#### TOWN OF BALDWIN

Population 476

No. 173.—Farm of 70 acres; 5 miles from Lowman station and postoffice, R. D.; 5 acres of timber. This farm lies well and is in good condition; 3 miles from State road; 2 apple orchards; a windmill at the barn; well and cistern

in house. Good fences. The house is nearly new, with 9 rooms and 5 large clothespresses, large pantry. Barn, 32x61; granary, 16x29; cow stable, 26x36; large workshop. Price, \$2,500. Terms, cash. This farm has never been rented. Address R. B. Osborne, owner, Lowman, N. Y. R. D. 1, Box 15.

No. 174.—Farm of 230½ acres; located 8 miles from Lowman P. O., R. D. 1; 5 miles from railway station at Erin, on line of Lehigh R. R.; 1 mile from school; 2 miles from churches; 1½ miles from butter factory; 5 miles from cheese factory and milk station; 8 miles from milk condensing plant. Highways in fair condition. Nearest city, Elmira, 9 miles distant, population 37,176, reached by highway. Surface of farm, some rolling and some nearly level. Soil, mostly dark loam, clay sub-soil. Acres in meadow, 88; pasture, 74; timber, 42, hemlock, basswood, ash, beech, maple and cherry. All cleared land is tillable. Fruit, about 30 old trees; also some young trees of apples, pears, plums and cherries. Best adapted to oats, corn, buckwheat, wheat, potatoes, barley and beans. Fences, mostly wire and rail, some pine stump and stone. House, 11 rooms, good condition. Outbuildings: barn, 30x40; barn, 32x60, with leanto, 16x54; 14 stanchions for cows; 9 horse stalls, concrete floor. Watered, house, by well; barns, by spring; fields, by spring and small creek. Occupied by owner. Reason for selling, ill health of owner. Price, \$4,500. Terms, cash. Some stock and tools go with the farm. Address W. H. Brewer, owner, Lowman, N. Y., R. D. 1.

No. 175.—Farm of 98 acres; located 1 mile from N. Chemung P. O., R. D. 1; 5 miles from railway station at Erin, on line of Lehigh Valley R. R.; 1 mile from school and Methodist church; 80 rods from butter factory; 3 miles from milk station; 8 miles from milk condensing plant. Highways in good condition. Nearest city, Elmira, population, 37,176, 8 miles distant, reached by highway. Surface of farm, part rolling and part level. Soil, gravel. Acres in meadow, 10; in natural pasture, 32; acres tillable, 66. Fruit, apple orchard. Adapted to clover and corn. Fences, some wire and some board. House, good size, fair condition. Outbuildings: basement barn, 36x46; basement barn, 26x36. Watered by well and spring. Occupied by owner. Price, \$3,500. Terms, cash. Address T. O. Crandall, owner, Lowman, N. Y. Owner will rent for cash.

No. 176.—Farm of 385 acres; located 10 miles from Elmira; 5 miles from railway station at Erin, on line of Lehigh Valley R. R.; R. D. 2 from Lowman; 1½ miles from school and Baptist church; 1 mile from butter factory; 9

miles from milk condensing plant. Highways, good. Surface of farm, rolling and level. Soil, clay and sub-soil. Acres in meadow, 100; in natural pasture, 200; in timber, 85, hemlock, ash, basswood, maple and beech; acres tillable, 300. Fruit, apples, pears, cherries, plums and peaches. Best adapted to oats, barley, buckwheat, potatoes and wheat. Fences, rail, stone and wire, fair condition. House, 28x32; ell, 18x22, 13 rooms, good condition. Outbuildings: cow barn, 50x24; underground stables, 30x40 with shed, 100x16; silo; barn, 26x52 with shed, 80x16; barn, 30x40; sheep barn, 10x24; horse barn, 20x30, with stables, 12x16. Watered, house, by well; barns, by springs and well; fields, by springs. Occupied by owner. Reason for selling, advanced age and ill health of owner. Price, \$6,500. Terms, one-half cash, balance on time. Address Fox or Levi Little, owners, Lowman, N. Y., R. D. 1.

## TOWN OF BIG FLATS

Population 1,535

No. 177.—Farm of 70 acres; located 2 miles from Big Flats P. O. and railway and trolley station; on line of Erie and D. & W. Railways; 2 miles from High school, Protestant churches, butter factory and milk station; 5 miles from milk condensing plant. Nearest cities, Corning, population 13,730, 9 miles, and Elmira, population 37,176, 10 miles, reached by rail and highway. Highways, good. Surface of farm, part level, part rolling. Good soil. Acres in meadow, 20; in natural pasture, 20; in timber, 30; oak, chestnut, maple, hemlock, pine, etc.; acres tillable, 40. Fruit, apples, pears, plums, cherries and grapes, also berries. Best adapted to hay, corn, wheat, oats, buckwheat, potatoes, etc. Fences good, mostly woven wire. House, 11 rooms, fine condition. Outbuildings: barn, 30x40, good; horse barn, 26x30, new, with wagon house; granary and hen house. Water piped to house. Occupied by owner. Reason for selling, poor health of owner. Price, \$2,500. Terms, \$1,500 cash, balance on mortgage. Address J. D. Ellis, owner, Big Flats, N. Y., Box 54.

## TOWN OF CATLIN

Population 870

No. 178.—Farm of 102 acres; located 1½ miles from Pine Valley P. O., R. D. 1 and railway station on line of Pennsylvania R. R.; 1½ miles from school

and churches; 5 miles from butter factory; cheese factory and milk station. Highways, hilly. Nearest city, Elmira, population 37,176, 11½ miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 25; in pasture, 20; in timber, 10, second growth. Fruit, 10 apple trees, 5 pears, 90 trees of other varieties set two years ago. Best adapted to general farm crops and fruit. Fences, poor condition. House, 6 rooms, poor condition. Outbuildings: barn, 25x37, cow shed attached, 16x32; poultry house, hog house, all in poor condition. House, barns and fields watered by springs and brook. Occupied by owner. Reason for selling, owner wishes to move to city. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. At above price for quick sale owner will include 2 horses, 2 cows, heifer, bull, calf, machinery, wagons and tools. Address Chester A. Smith, owner, Horseheads, N. Y., or G. A. Burris Realty Co., brokers, 218 East Main St., Elmira, N. Y.

#### TOWN OF ERIN

##### Population 889

No. 179.—Farm of 139 acres; located 1 mile from P. O.; ¾ mile from railway station at Swartwood, on line of L. V. R. R.; 1 mile from school and Methodist church; ¾ mile from butter factory; 3½ miles from milk station. Highways, good. Nearest village, Van Etten, population, 476, 4 miles distant; Spencer, population, 569, 8 miles distant; Elmira, population 37,176, 19 miles distant, reached by rail and highway. Surface, partly hilly. Soil, clay and loam. Fruit, 60 or more apple trees. Best adapted to hay, buckwheat, potatoes and dairying. Fences, board, rail and wire, not very good. House, 20x32; 2 barns, 30x40. Watered, house, by well; barns, by brook; fields, by brook and spring. Unoccupied. Reason for selling, death of owner. Price, \$1,800. Terms, part cash. Address Sophie A. White, owner, 58 Port Watson St., Cortland, N. Y.

No. 180.—Farm of 50 acres; located ½ mile from Hicks P. O.; 4½ miles from railway station at Erin, on line of Lehigh Valley R. R.; ½ mile from school; ½ mile from Methodist church; ½ mile from butter factory. Highways, good hill road. Nearest city, Elmira, population 37,176, 12 miles distant, reached by highway and rail. Surface

of farm, rolling and hilly. Soil, clay loam. Acres in natural pasture, 5; in woodlot, 2; acres tillable, 40. Fruit, about 100 apple, 4 pear, 3 plum, 20 peach and 6 cherry trees; 2 grape vines. Best adapted to potatoes, fruit, hay, buckwheat, rye, oats and corn. Fences, rail, wire and board, poor condition. House, 8 rooms with cellar, good condition. Outbuildings: barn, 30x40, concrete basement floor; shed attached, 20x40; hen house, 16x24, all in good condition. Watered, house, by well; barn, by creek; and fields, by springs and brook. Occupied by owner. Reason for selling, old age. Price, \$1,500. Terms, \$1,000 down, balance on 6% mortgage. Address Samuel Coleman, owner, Hicks, N. Y., or G. A. Burris Realty Co., agent, 218 Water St., Elmira, N. Y.

#### TOWN OF HORSEHEADS

##### Population 5,376

No. 181.—Farm of 110 acres; located 2 miles from Horseheads P. O. and railway station, on line of Erie, N. C. & D., L. & W. R. Ra.; ½ mile from school; 2 miles from churches, butter factory and milk station. Highways, good. Nearest city, Elmira, population 37,176, reached by rail and highway, 8 miles distant. Surface of farm, rolling. Soil, clay loam. Four acres of oak timber; acres tillable, 106. Fruit, apples and pears. Best adapted to corn, oats, wheat and tobacco. Fences, wire and board. House, 10 rooms, fair condition. Outbuildings: barn, 30x40; barn, 20x50; barn, 16x32; barn, 30x40. Watered by well, windmill and springs. Occupied by tenant. Reason for selling, to close an estate. Price, \$6,500. Terms, cash. Address Geo. B. Manning, owner, Horseheads, N. Y.

No. 182.—Farm of 117 acres; located 2½ miles from Horseheads P. O., R. D. 1, and railway station on line of Erie, Pennsylvania and D., L. & W. R. Ra.; 2½ miles from butter factory. Nearest city, Elmira, population 37,176, 8½ miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 50; in pasture, 12; in timber, 10, second growth; acres tillable, 95. Fruit, 100 apple trees, 6 pears, 3 plums, 6 cherries, 20 peaches. Best adapted to potatoes, grain, grass and fruit. Fences, woven and barbed wire, good condition. House, 8 rooms, fine condition, recently remodeled. Outbuildings: basement barn, 35x

60; barn, 30x40; poultry house, 10x30; barns painted and in good condition. House watered by well and cistern; barns, by well; fields, by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$3,800. Terms, \$1,800 down, balance on mortgage at 5%. Address E. B. English, owner, Breesport, N. Y., or G. A. Burris Realty Co., brokers, 218 E. Water St., Elmira, N. Y.

## TOWN OF SOUTHPORT

Population 2,034

No. 183.— Farm of 100 acres; located  $1\frac{1}{2}$  miles from Pine City P. O., R. D. 1, and railway station on line of Erie R. R.; school on farm;  $1\frac{1}{2}$  miles from Protestant churches, and 3 miles from butter factory and condensation. Highways, State road. Nearest city, Elmira, population 37,176,  $1\frac{1}{2}$  miles distant, reached by highway. Surface of farm, partly level, balance hilly or rolling. Soil, sandy and gravel loam in flats, uplands clay loam. Acres in meadow, 39; in natural pasture, 20; in timber, 25, pine, hemlock, chestnut and oak; acres tillable, 60 to 75. Fruit, 14 apple, 2 pear, 3 plum, 2 cherry and 2 peach trees and grape arbor. Best adapted to tobacco, vegetables, fruits, grains and grasses. Fences, mostly barbed wire, some board, fair condition. House, 8 rooms, good condition. Out-buildings: barn, 40x75; tobacco shed, 32x48; hen house; hog house; also 5-room tenant house, all in fairly good condition. Watered, house, by well; barn, by well; fields, by creek and springs. This farm is about 3 miles

from the Chemung River. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$8,000. Terms, \$2,500 down, balance on 5% mortgage. Address Elmer Daggett, owner, R. D. 1, Pine City, N. Y., or G. A. Burris Realty Co., agents, 218 East Water St., Elmira, N. Y.

## TOWN OF VETERAN

Population 1,470

No. 184.— Farm of 100 acres; located 3 miles from Horseheads P. O., R. D. 3, and railway station on lines of Erie, Pennsylvania and L. V. R. R.s; 3 miles from butter factor; 6 miles from condensing plant. Nearest city, Elmira, population 37,176, 9 miles distant, reached by rail or State highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 30; in timber, 8, second growth; acres tillable, 92. Fruit, 15 apples, 10 pears, 8 plums, 12 cherries. Best adapted to general farming and fruit. Fences, woven and barbed wire, some rail, good condition. House, 2 stories, fine condition. Out-buildings: barn, concrete basement, gambrel roof, 36x48; horse and carriage barn, gambrel roof, 30x30; tool house with concrete floor, 20x40; poultry house, 12x20; all buildings in fine condition. House watered by well and cistern; barns and fields, by springs. Occupied by owner. Reason for selling, advanced age and wishes to retire. Price, \$6,000. Terms, \$1,500 cash, balance on mortgage at 5%. Address A. J. Rose, owner, R. D. 3, Horseheads, N. Y., or G. A. Burris Realty Co., brokers, 218 East Main St., Elmira, N. Y.

## CHENANGO COUNTY

Area, 898 square miles. Population, 35,575. Annual precipitation, 56.23 inches. Annual mean temperature, 47.4°. Number of farms, 4,258. Average price of farm land per acre is \$27.63. With an increase of nearly \$2,000,000 in the value of farm buildings alone there must be prosperity among the farmers and it seems inevitable that land values should show a decided increase during the next two years.

This is one of the interior counties lying southeast of the center of the State.

The surface is elevated and in some places broken and hilly. Two broad and deep valleys traverse the county from north to south. These ridges are subdivided by numerous lateral and some parallel valleys. The summits of these ridges are broad and rolling with an elevation of 300 to 800 feet. There is considerable timber on this upland. Streams, brooks, and springs abound throughout the county and furnish abundant water for villages and farms. Tully limestone and Genesee slate and sandstones are found in the southern part of the county. The sandstone quarries furnish good material for building and flagging. Grindstone and whetstones are quarried near Oxford.

The soil of the county is almost entirely derived from the disintegration of the rocks and is strong and productive. The D., L. & W.; N. Y., O. & W. and D. & H. railroads give ample, cheap and quick transportation of all farm products to the

great markets of the State. Dairying is the great industry and the production was 29,919,490 gallons of milk; receipts from the sale of dairy products, \$2,957,886. There are fifty-eight milk stations and factories in this county. The leading crops grown were corn, 177,897 bushels; oats, 440,758 bushels; barley, 4,935 bushels; buckwheat, 75,922 bushels; potatoes, 671,087 bushels; hops, 69,749 pounds; hay and forage, 222,054 tons. The value of all farm property is \$20,912,000, an increase of 19.2 per cent. over that of ten years ago.

Chenango is an excellent fruit county; some of the famous apples originated in this county, notably the Chenango strawberry apple. There are churches of all denominations located in the rural districts, and the 355 district schools, graded and high schools in villages furnish ample educational facilities. There are 1,661 miles of improved highway and 54 miles of State road.

#### TOWN OF AFTON

Population 1,780

No. 185.—Farm of 220 acres; located 2 miles from Harpursville P. O., R. D. 1;  $1\frac{1}{2}$  miles from railway station at Harpursville, on line of D. & H. Ry.;  $\frac{1}{2}$  mile from school; 2 miles from churches;  $1\frac{1}{2}$  miles from milk station. Highways, good. Nearest city, Binghamton, 23 miles distant, population 48,443, reached by rail. Surface of farm, rolling. Soil, clay loam. Acres in meadow, 75; in natural pasture, 100; in timber, 45, hemlock, chestnut and hardwood; acres tillable, 150. Fruit, young orchard. Best adapted to hay, corn, potatoes, oats and buckwheat. Fences, wire, good. House, 13 rooms, good condition. Outbuildings: barn, 66x30, with basement for 40 cows, cement floor, steel stanchions and water buckets in reach of cows, horse barn attached, 26x36; granary, 18x24, good condition. Watered by spring and creek. This farm is  $1\frac{1}{2}$  miles from Susquehanna River. Occupied by owner. Reason for selling, owner desires to engage in other business. Price, \$6,000. Terms, \$2,000 down, remainder on easy terms at 5% interest. Address A. B. Pratt, owner, Harpursville, N. Y., R. D. 1.

No. 186.—Farm of 182 acres; located 3 miles from Afton or Bainbridge P. O., R. D. No. 1, 3 miles from railway station at Afton or Bainbridge, on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school;  $\frac{1}{2}$  mile from Methodist church. Highways, in good condition, somewhat hilly, mostly level. Nearest city, Binghamton, population, 48,443, 20 miles distant, reached by rail and highway. Surface of farm, meadows, mostly level, pastures sloping. Altitude, about 850 feet. Soil, loam very productive. Acres in meadow, 92; in natural pasture, 50; in timber, 40, second growth. Fruit, apples, pears and plums, 50

trees. Best adapted to potatoes, corn, cabbage and oats. Fences, all wire, first-class condition. House, 2 stories, 9 rooms, good condition. Outbuildings: basement barn; concrete stable; 25 cow stanchions; good silo; horse barn, with 4 stalls; new hen house, 12x30; ice house and milk house, all in good condition. Watered by well, running water, springs and brook. Occupied by owner. Reason for selling, owner unable to work farm. This farm is 3 miles from Susquehanna River. Price, \$5,500. Terms, \$3,500 down, balance on easy terms. Price includes 15 Holstein cows, 7 horses, hay, farm tools and implements. Address Geo. Strong, owner, Afton, N. Y., or Darwin H. Craig, agent, Afton, N. Y.

#### TOWN OF BAINBRIDGE

Population 2,017

No. 187.—Farm of 300 acres; located  $1\frac{1}{2}$  miles from Bainbridge P. O.;  $1\frac{1}{2}$  miles from railway station at Bainbridge, on line of D. & H. R. R.; 25 rods from school;  $1\frac{1}{2}$  miles from Baptist, Methodist, Catholic and Presbyterian churches;  $1\frac{1}{2}$  miles from milk station; 4 miles from condensing plant. Highways, hilly but good. Nearest city, Binghamton, population 48,443, 35 miles distant, reached by D. & H. R. R. Surface of farm, part level and part rolling. Soil, good. Acres in meadow, 125; in natural pasture, 100; in timber, 50, oak, chestnut and pine; acres tillable, 250; 50 apple trees. Best adapted to hay, corn, oats and potatoes. Fences, wire and rail, in good condition. Large 2-story house, in good condition. Large basement barn, 100x40; concrete basement; horse barn; hay barn; corn house and milk house. House watered by well; barns, by running water; fields, by springs;  $1\frac{1}{2}$  miles from Susquehanna River; \$5,000 worth of standing timber on this farm. Will keep 50 cows. Oc-

cupied by owner. Reason for selling, poor health of owner. Price, \$10,000. Terms,  $\frac{1}{2}$  cash. Address D. J. Baker, owner, Bainbridge, N. Y.

No. 188.—Farm of 18 acres; located  $\frac{1}{8}$  mile from Bainbridge P. O., and railway station, on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches;  $\frac{1}{8}$  mile from butter factory and milk station. Highways, good and level. General features level. Altitude, 1,000 feet. Nature of soil, sandy loam; acres tillable, all. Fruit, apple and cherry trees. Best adapted to fruit, vegetables, hay and grain. House, 7 rooms of good size. Large basement barn. House watered by well; barns, by well, and fields, by well. Susquehanna River within a few rods. Occupied by tenant. Reason for selling, other business. Price, \$2,700. Terms, small payment, remainder on mortgage. Address Chris Foley, owner, Bainbridge, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

No. 189.—Farm of 202 acres; located 5 miles from Bainbridge P. O., and railway station, on line of D. & H. R. R.; 1 mile from school; 3 miles from churches; 5 miles from butter factory and milk station. Highways, good. General surface, somewhat rolling. Altitude, 1,200 feet. Nature of soil, good loam. Acres that can be used as meadow, 50; in natural pasture, 100; in timber, 50, maple, beech, ash, cherry, basswood, etc.; acres tillable, 100. Fruit, 50 to 75 apple trees and some other fruit. Best adapted to hay, corn, small grains, potatoes, etc. Fences, rail and wire, fair condition. House, 10 rooms, good condition. Barns, 63x40 and 46x30, good condition. House watered by well; barns, by creek, and fields, by creek. Occupied by tenant. Reason for selling, other business. Price, \$5,500. Terms, easy. Address H. M. Hovey, owner, Binghamton, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

No. 190.—Farm of 135 acres; located 3 miles from Bainbridge P. O. and railway station, on line of D. & H. R. R.; 1 mile from school; 2 miles from churches; 3 miles from butter factory and milk station. Highways, good hilly road. General surface, level and hilly. Altitude, 1,300 feet. Nature of soil, good loam. Acres in meadow, 40; in natural pasture, 70; in timber, 25, pine, hemlock and hard wood; acres tillable,

100. Fruit, for family use. Best adapted to hay, grain and potatoes. Fences, rail and wire, good condition. House, 10 rooms, in fair condition. Barn large, in fair condition. House watered by well, barns by creek, fields by creek. Occupied by owner. Price, \$4,600 with stock and tools. Terms, reasonable. Tools are mostly new, three horses, twelve cows, 300 hens. Will sell bare farm if desired. Address L. Getter, Bainbridge, N. Y., owner, or H. H. Lyon, agent, Bainbridge, N. Y.

No. 191.—Farm of 152 acres; located 4 miles from Bainbridge P. O., R. D. 4, and railway station on D. & H. R. R.; 1 mile from school and churches, Methodist and Baptist; others are 4 miles distant; 4 miles from milk station. Highways, hilly, but good. Nearest city, Binghamton, population 48,443, 35 miles distant, and reached by rail or highway. Surface of farm, rolling, but not hilly, except pasture. Soil, clay loam. Acres in meadow, 50; in natural pasture, 62; in timber, 40, hemlock and maple; acres tillable, 75. Fruit, apples and pears. Best adapted to hay and grain. Fences, wire and rail, in good condition. House, in good condition. Barn, corn house, hog house, poultry houses, etc. Watered, house by well, barn and fields by springs. Farm is situated within 2 miles of Brackets Lake. Occupied by owner. Reason for selling, ill health of owner. Price, \$3,000. Terms, easy. Address Wm. Davis, owner, Bainbridge, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

No. 192.—Farm of 140 acres; located  $\frac{1}{4}$  mile from Sidney P. O. and railway station, on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school and churches;  $\frac{3}{4}$  mile from butter factory, cheese factory and milk station. Highways, excellent, level road. Nearest city, Binghamton, population 48,443, 40 miles distant, reached by rail or highway. Surface of farm, mostly level, river flat. Soil, alluvial, loam and gravel. Acres in meadow, 60; in pasture, 75. Acres tillable, 100. Good orchard. Best adapted to hay and grain. Fences, wire, good. Newly remodeled and painted house. New barn. Watered, house by well and windmill; barn by well and windmill; fields by river and springs. Farm is situated in vicinity of Susquehanna river. Occupied by owner. Reason for selling, owner has other business. Price, \$8,500. Terms, reasonable. Ad-

dress Mr. Giles, owner, Sidney, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

#### TOWN OF COLUMBUS

Population 838

No. 193.—Farm of 200 acres, 8 miles from Sherburne P. O. and New Berlin P. O., R. D. 1, on line of D., L. & W. and O. & W. R. Rs.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from three churches; 5 miles from milk station and condensery. Highways, good. Surface, rolling. Soil, gravelly loam, good. Acres in meadow, 50; natural pasture, 125; timber, 25, beech, birch and maple; acres tillable, 175. Fruit, 50 apple and 10 pear trees. Best adapted to dairying, grass, potatoes, corn, oats and buckwheat. Fences, wire, in good condition. House, 30x45, needs some repair. Three barns, one, 30x60, with basement, in good condition; one, 30x40; one, 20x30. Watered, house by well; barns by springs and brooks. Occupied by tenant. Rented for one year with privilege of selling. This farm is on the main road from Sherburne to New Berlin. A first-class dairy farm, very productive. Reason for selling, age of owner and difficulty of obtaining help. Price, \$2,500. Terms, \$1,000 down, balance on bond and mortgage or on interest and \$150 a year on principal. Address E. C. Bryant, owner, Sherburne, N. Y., R. D. 1. Owner will rent with option to buy.

No. 194.—Farm of 145 acres; located 9 miles from New Berlin P. O., R. D. 3; 3 miles from railway station at Sweets, on line of Unadilla Valley R. R.;  $\frac{3}{4}$  mile from school;  $2\frac{1}{2}$  miles from Baptist church; 5 miles from butter factory, cheese factory and milk station; 9 miles from condensing plant. Highways, good. Nearest villages, New Berlin, population 1,114, 9 miles distant; Sherburne, population 960, 11 miles distant; reached by highway. Surface of farm, part rolling, part level, part hilly. Altitude, 1,600 feet. Soil, gravel and loam. Acres in meadow, 40; in natural pasture, 60; in timber, 45, basswood, ash, maple and beech; acres tillable, 80. Fruit, 5 acres of apples, 5 kinds of pears. Best adapted to dairying. Fences, stone wall, rail and wire, in good condition. House, 84x24, well painted, slate roof, 2 stories, observatory on top, 20 rooms, large cellar, furnace and a conservatory, in good condition. Barn, 30x40; barn, 20x30; stable, 43x21; shed, 40x20; crib, 12x18; hen house,

12x24; 2 shops. Watered, house by well; barn by well, lead pipe to trough; fields by 3 springs and brook. Three miles from Unadilla river. Occupied by tenant. Reason for selling, to settle an estate. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Address F. J. Tuttle, owner, Norwich, N. Y.

No. 195.—Farm of 250 acres; located 8 miles from New Berlin P. O., R. D. No. 4;  $3\frac{1}{2}$  miles from railway station at South Edmeston, on line of Unadilla Valley R. R.;  $\frac{1}{2}$  mile from school; 2 miles from church;  $3\frac{1}{2}$  miles from butter factory. General surface, on eastern slope; 30 acres level. Acres in meadow, 120; in pasture, 60; in timber, 70, 75,000 feet of ash, beech and maple. Acres tillable, 180. Fruit, 2 acres of apples. Best adapted to dairying, hay and stock farm. Fences, wire, in good condition. House, 2 stories, 9 rooms, built 5 years ago. Outbuildings: cow barn, 36x100; horse barn, 30x20, stone basement; silo, corn crib and poultry house. House watered by running water; barns by springs. Occupied by owner. Price, \$5,000. Terms,  $\frac{1}{4}$  cash, balance to suit purchaser. Address Frank Whitten, owner, New Berlin, N. Y., R. D. No. 4.

No. 196.—Farm of 140 acres; located 6 miles from Sherburne P. O., R. D. 1, and railway station, on line of D., L. & W. Ry.; 1 mile from school; 6 miles from churches of all denominations;  $\frac{1}{4}$  mile from butter factory;  $\frac{1}{4}$  mile from cheese factory; 2 miles from milk station; 18 miles from condensing plant. Highway, good. Nearest city, Norwich, population 8,560, distant 18 miles, reached by rail and highway. General surface of farm, rolling and level. Nature of soil, clay and loam. Acres in meadow, 30; in pasture, 90; timber, 20. Fruit, 60 apple, 10 pear, 6 plum and 12 cherry trees. Best adapted to oats, cabbage, corn and potatoes. Fences, wire. House,  $1\frac{1}{2}$  stories, 12 rooms; barn, 30x40, in fair conditions; granary, 14x14. Watered, house by well; barns by well; fields, by brook and springs. Reason for selling, to settle an estate. Price, \$2,500. Terms, reasonable. Address Thomas Boss Estate, owners, Sherburne, N. Y., or George L. Sholes, agent, Sherburne, N. Y.

No. 197.—Farm of 105 acres; located  $5\frac{1}{2}$  miles from Sherburne P. O., R. D. No. 1;  $4\frac{1}{4}$  miles from railway station

at South Edmeston, on line of Unadilla Valley R. R.;  $\frac{1}{4}$  mile, from school;  $1\frac{1}{4}$  miles from churches;  $2\frac{1}{4}$  miles from cheese factory. Nearest city, Norwich, population 8,580, 17 miles distant, reached by rail or good highway. General surface, mostly level, part rolling. Acres in meadow, 40; in pasture, 40; in timber, 25, hemlock, elm, basswood and beech. Acres tillable, 70. Fruit, 100 apple trees, varieties. Best adapted to corn, cabbage, hay, clover and grain. Fences, wire, rail and board, need repair. House,  $1\frac{1}{2}$  stories, 8 rooms; 2 barns, 30x40, 1 basement, wall needs laying over; three other buildings. Occupied by owner. Reason for selling, in other business. Price, \$2,600. Terms, \$700 cash, balance to suit purchaser. Address George H. Campbell, owner, Sherburne, N. Y.

## TOWN OF COVENTRY

Population 764

No. 198.—Farm of 160 acres; located 1 mile from Coventryville P. O., R. D. No. 4; 4 miles from railroad station, on line of D., L. & W. R. R.; 1 mile from school; 1 mile from Protestant church. Nearest city, Norwich, 16 miles distant, reached by rail and highway. Occupied by owner. Surface of farm, slightly rolling. Soil, good clay loam. Acres in meadow, 40; in natural pasture, 75; in timber, 25, pine, hemlock, beech and maple. Acres tillable, 100. Fruit, apples, pears and plums. Best adapted to corn, potatoes, oats, buckwheat, etc. Fences, wire and rail, good condition. House, 2 stories, 14 rooms, upright 28x40, wing 18x28; telephone, hot and cold water, bath. Outbuildings: barn, 36x60; basement, blacksmith shop and tool house combined; corn house, 18x24, and milk house, all in fine condition, newly painted. Watered, house by drilled well; water in barn; fields, by springs and creek. Reason for selling, owner has another farm. Price, \$4,000. Terms, \$1,000 cash, balance on bond and mortgage at 5%. Address Elmer E. Shapley, owner, Bainbridge, N. Y., R. D. No. 4.

## TOWN OF GERMAN

Population 371

No. 199.—Farm of 218 acres; located 3 miles from German P. O.; 6 miles from railway station, on line of D., L. & W. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from Methodist church;  $\frac{1}{4}$  mile from butter factory and cheese factory;  $4\frac{1}{2}$

miles from milk station; 9 miles from condensing plant. Nearest city, Binghamton, population, 48,443, 26 miles distant. Highways, hilly but good. Soil, clay loam. Acres in meadow, 50; in natural pasture, 75; in timber, 88, maple, hemlock, ash, cherry, basswood, beech; acres tillable, 100. Fruit, 100 apple, 3 pear trees. Best adapted to potatoes, corn and oats. Fences, stone wall, rail and wire, in good condition. House, 30x40, 10 rooms and basement, in good condition. Barn, 30x40; basement barn, 30x50; basement horse barn, 26x36; granary; hen house; hog house. Watered, house and barn by springs; fields, by springs and brook. Five miles from Silver Lake, 6 miles from Echo Lake, 4 miles from Otselic River. A good dairy and stock farm, keeps 24 cows and 3 horses. Occupied by tenant. Reason for selling, advanced age of owner. Would sell farm and reserve timber for \$3,000. Terms, \$1,000 down and \$200 and interest annually at 5%, or \$4,000 for farm and timber, or \$6,000 for farm, stock, tools, etc. Terms, \$2,000 down, balance on time. Address Uriah Loomis, owner, Smithville Flats, N. Y. Owner will rent.

## TOWN OF GREENE

Population 2,992

No. 200.—Farm of 8 acres; located  $\frac{1}{2}$  mile from Greene P. O., R. D. No. 3, and railway station on line of D., L. & W. R. R.;  $\frac{1}{2}$  mile from school and churches. Nearest city, Binghamton, population 48,443, 20 miles distant, reached by rail or good highway. General surface, level, some slightly sloping to the east. Nature of soil, dark loam. Acres in meadow, 6; in pasture, 2. Acres tillable, 7. Fruit, 40 trees and small fruit. Best adapted to garden trucking and berries. Fences, wire, fair condition. House, 12 rooms, good condition. Outbuildings: barn, 20x36; ice house; wood house; small granary, poultry house, concrete floor, 14x32. House and barns watered by running water, fields by Chenango River which borders farm on east side. Occupied by owner. Reason for selling, wishes to retire. Price, \$2,600. Terms, cash. Address Rufus S. Tyler, owner, Greene, N. Y.

## TOWN OF GUILFORD

Population 2,013

No. 201.—Farm of 114 acres; 4 miles from Bainbridge P. O. and railway station, on line of D. & H. R. R.;  $\frac{1}{2}$  mile

from school; 4 miles from 5 churches; R. D. 3 from Bainbridge. Good roads. Four milk stations and shipping stations within 2 to 4 miles of farm. Nearest village, Bainbridge, population, 1,159, distant 4 miles, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 40; in natural pasture, 54; in timber, 20, hemlock, pine, chestnut and hard wood; acres tillable, 94. Fruit, 5 plum, 4 pear, 35 apple trees, 2 grapevines, also currants and berries. Adapted to all crops. Fences, wire and rail, in good condition. House, 20x28, and ell, 18x36, 2 stories, good condition, new. Barn 32x60, lean-to, 14x68, granary, hen house, shop. Watered, house, by running water and 2 wells; barns, by running water; fields, by brook and streams. Susquehanna River, 4 miles distant. Reason for selling, wife is dead and son in high school. Owner will sell stock, team and tools if wanted, at a bargain. Owner will meet prospective buyers at Bainbridge. Price, \$3,000. Terms, \$2,050 down, balance on mortgage. Name and address of owner, O. L. Yale, owner, Bainbridge, N. Y., R. D. 3.

No. 202.—Farm of 100 acres; located 1 mile from Guilford P. O. R. D. No. 1 and railway station on line of N. Y. O. & W. R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory and milk station. Nearest city, Norwich, population 8,560, 10 miles distant, reached by rail or highway. General surface of farm,  $\frac{3}{4}$  level,  $\frac{1}{4}$  rolling. Altitude, 1,500 feet. Acres in meadow, 75; in pasture, 40; in timber, 25, second growth of hardwood. Acres tillable, 75. Fruit, 9 apple trees, 2 pears, 5 plums, 5 cherries. Best adapted to hay, grain, corn, oats and potatoes. Fences, wire and rail, good condition. House, 14 rooms, modern improvements. Outbuildings: 3-story barn with 20 stanchions, 3 single stalls, 1 box stall. House watered by running water; barns by running water and springs. Occupied by owner. Reason for selling, ill health. Price, \$6,000. Terms on application. Address Minnie Martenson, owner, Guilford, N. Y., or R. A. Borland, broker, 3 Cook Block, Norwich, N. Y.

No. 203.—Farm of 66 acres; located 4 miles from Bainbridge P. O., R. D. No. 4; 3 miles from railway station at Guilford, on line of N. Y. O. & W. R. R.;

1 mile from school; 3 miles from churches; 4 miles from butter factory and milk station. Highways, good. Nearest city, Binghamton, population 48,443, 5 miles distant, reached by rail. General surface rolling and level. Altitude, 1200 feet. Nature of soil, loam. Acres in meadow, 30; in natural pasture, 36. Acres tillable, all. Fruit, enough for family use. Best adapted to hay, corn, oats, barley, buckwheat, etc. Fences, well kept. House, 10 rooms, good condition. Barn, 30x40, good condition. House watered by well; barns by creek and fields by creek. Occupied by owner. Reason for selling, old age. Price, \$2,700. Terms, easy. Address Joe Williams, owner, Bainbridge, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

No. 204.—Farm of 200 acres; located 4 miles from Bainbridge P. O. and railway station, on line of D. & H. R. R.; 1 mile from school; 4 miles from churches; 4 miles from butter factory and milk station. Highways, good. General surface, level and part hilly. Altitude, 1,200 feet. Nature of soil, loam and sandy loam. Acres in meadow, 70; in natural pasture, 90; in timber, 40. Acres tillable, 125. Fruit, for home use. Best adapted to hay, corn, oats, buckwheat, etc. Fences, rail and wire. House, 12 large rooms. Two large barns in good condition. House watered by spring; barns, by running water; fields, by springs and creek. Occupied by tenant. Reason for selling, owner has other business. Price, \$7,000. Terms, easy. Address H. H. Van Cott, owner, Bainbridge, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

No. 205.—Farm of 101 acres; located 4 miles from Guilford P. O., R. D. 3; 2 miles from railway station at East Guilford on line of O. & W. R. R.;  $\frac{1}{4}$  mile from school; 4 miles from churches; 4 miles from milk station. Highways, hilly but good. Nearest village, Sidney; population 2,507, 5 miles distant, reached by highway. Surface of farm, quite level. Soil, clay loam. Acres in meadow, 36; in natural pasture, 50; in timber, 15. Acres tillable, 60. Best adapted to hay and grain. Fences, rail and wire. House, in good condition. Barn, poultry houses, etc. House is supplied with well water; barn by well and spring; fields by springs. Premises are unoccupied. Reason for selling, owner in other business. Price, \$2,000.

Terms, easy. Address H. H. Van Cott, owner, Bainbridge, N. Y., or H. H. Lyon, agent, Bainbridge, N. Y.

## TOWN OF NEW BERLIN

Population 2,328

No. 206.— Farm of 160 acres;  $\frac{3}{4}$  mile from New Berlin, R. D. Suitable for dairying and stock raising. Five acres of timber; balance meadow and pasture. Watered by springs, brook and Unadilla River. One-half mile from Borden's condensery. State road being constructed. Houses, one 3 stories, slate roof, 20x60; the other 24x30, 1 $\frac{1}{2}$  stories, both in good repair. Barns., 30x60 and 30x40, with basement, in good condition. Fences, good. Have sold \$3,300 worth of milk in one year. Price, \$15,000. Terms, one-half cash, balance on time; will make a good investment at price named. Address Crandall Bros., owners, New Berlin, N. Y. Owner will rent on shares.

## TOWN OF NORTH NORWICH

Population 691

No. 207.— Farm of 91 $\frac{1}{2}$  acres; located 2 $\frac{1}{2}$  miles from Sherburne P. O., R. D. 3 and railway station, on line of D., L. & W. R. R.; 1 mile from school; 2 $\frac{1}{2}$  miles from churches and milk station. Highways, good. Nearest city, Norwich, 10 miles distant, reached by highway. Surface of farm, rolling. Soil, gravel loam. Acres in natural pasture, 30; in timber, 10, maple, ash, basswood and hemlock. Fruit, apples, pears, cherries, plums and small fruits. Best adapted to cabbage, potatoes, corn and oats. Fences, wire. House, 7 rooms, good condition. Out-buildings, barn, 25x40; ice house, milk house and hen house, good condition. Watered, house by well; barns by running water; fields by springs. Occupied by owner. Price, \$2,000. Terms, \$1,000 cash, balance on easy terms at 5% interest. Address Devere Moore, owner, Sherburne, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

## TOWN OF NORWICH

Population 8,560

No. 208.— Farm of 345 acres; 6 miles from Norwich, on line of N. Y., O. & W. R. R.; also D., L. & W. R. R. Twenty-five acres timber, balance tillable. Apples and other fruit. Altitude, 600 feet. Twelve-room house. Cow

barn, 96 feet long. Wagon house, hop house, and four hay barns. Watered by springs. Fences, wire and rail. There is timber enough on farm to nearly pay for it, estimated about 200,000 feet of basswood lumber, also maple and beech. Condensing plant located convenient to farm or milk can be shipped to New York. New silo, 14x32. A first-class farm in every respect. Fifty cows go with farm if desired. Any reasonable offer will not be refused. Terms to suit purchaser. Address L. K. Wood, owner, 27 Hayes St., Norwich, N. Y.

No. 209.— Farm of 212 acres; located 2 $\frac{1}{2}$  miles from Sherburne P. O. and railway station, on line of D., L. & W. R. R.; 2 $\frac{1}{2}$  miles from Galena railway station, on line of O. & W. and D., L. & W., railways. Soil, gravel loam mixed, mostly river flats. Acres in meadow and pasture, 180; acres in timber, 20; good blue stone quarry on farm. House, 1 $\frac{1}{2}$  stories. Watered by good well. Milk collected by Borden's wagon. Out-buildings, large barn, cow stable with concrete floor and ice house. A never-failing spring runs to milk house; large vat for watering stock in barn. Material on farm for a frame, stone or cement building. Direct road to Binghamton from Utica passes house. Chenango river at foot of slope on which house stands. One old and one young orchard. State road soon to be finished. It is expected that trolley line will soon pass farm. Price, \$8,500, including tools. Terms, \$2,000 down, balance on mortgage at 5% interest. Address Mrs. Adelia Marquis, owner, Norwich, N. Y.

No. 210.— Farm of 3 acres; located 2 miles from Norwich P. O., R. D. 5, and railway station on line of D., L. & W. R. R.; near school; 3 miles from churches; 2 $\frac{1}{4}$  miles from milk station; 3 $\frac{1}{4}$  miles from condensing plant. Highways, State road. Nearest city, Norwich, population 8,560, 2 miles distant, reached by highway. General surface,  $\frac{1}{2}$  level,  $\frac{1}{2}$  hilly. Altitude, 1,000 feet. Acres in meadow, 2; in pasture, 1. Fences, board and wire, fair condition. Best adapted to garden truck, chickens and pigs. House, 2 stories and basement, well painted. Sheds and hennery in good condition. House watered by spring, fields by brook and spring. Occupied by tenant. Possession given in

30 days. Price \$750. Terms, as arranged, \$50 discount for cash. Address R. A. Borland, owner, 3 Cook Block, Norwich, N. Y.

No. 211.—Place of 1 acre; located  $2\frac{1}{2}$  miles from Norwich P. O. and railway station, on line of N. Y., O. & W. and D., L. & W. R. R.; 20 rods from school;  $2\frac{1}{2}$  miles from city schools and churches; 2 miles from milk station;  $2\frac{1}{2}$  miles from milk condensing plant. Highways, in good condition. Nearest city, Norwich,  $2\frac{1}{2}$  miles distant. Altitude, 800 feet. Surface, level. Soil, stony and sandy loam. All tillable. A few berries. Fences, wire. Small 5-room house, good condition. Small barn, good condition. Watered by brook and spring. Occupied by owner. Price, \$500. Address Hubert Norris, owner, Norwich, N. Y., or R. A. Borland, agent, 3 Cook Block, Norwich, N. Y.

#### TOWN OF OXFORD

Population 3,014

No. 212.—Farm of 140 acres;  $5\frac{1}{2}$  miles from Oxford, R. D. Soil, clay loam. Ten acres timber; balance meadow and pasture. Land under good cultivation. Well watered and in good condition.  $1\frac{1}{2}$  story house, 27x29, with wing, 24x30, in good condition. Barns, large and in good condition. Price, \$5,000. Terms,  $\frac{1}{2}$  cash. Address C. H. Smith, owner, Oxford, N. Y., R. D. 3, Box 521.

No. 213.—Farm of 90 acres; located  $5\frac{1}{2}$  miles from Bainbridge P. O., R. D. 4;  $5\frac{1}{2}$  miles from railway station at Bainbridge, on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school; 1 mile from Methodist church;  $1\frac{1}{2}$  miles from Baptist church; 4 miles from butter factory and cheese factory;  $5\frac{1}{2}$  miles from milk station. Highways, good. Nearest village, Bainbridge,  $5\frac{1}{2}$  miles distant, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 40; in natural pasture, 20; in timber, 30, oak, chestnut, pine, hemlock, good quality; acres tillable, 50. Fruit, 25 apple, 6 plum, 8 pear and 3 crab apple trees. Best adapted to potatoes, corn, alfalfa and oats. Fences, mostly wire, some rail, in good condition. House, 20x40, 8 rooms, in fair condition. Hog house, 18x20; hen house, 12x14; wood house, 12x14, all in fair condition. Barns burned. Watered,

house, by good spring; buildings, by running water in yard; fields, by running water in pasture. One mile from Brocket Lake,  $5\frac{1}{2}$  miles from Susquehanna River. Unoccupied. Timber is in fine growing condition, 1 mile from sawmill, good roads to same. Reason for selling, poor health of owner. Price, \$2,500. Terms, \$2,000 cash, balance on easy terms. Address W. E. Ingersoll, owner, Bainbridge, N. Y., R. D. 1.

No. 214.—Farm of 223 acres; located 6 miles from Oxford P. O., R. D.;  $4\frac{1}{2}$  miles from railway station at Guilford, on line of O. & W. R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from churches; 4 miles from butter factory and cheese factory; 6 miles from condensing plant. Highways, good. Nearest large village, Oxford, population 1,654, 6 miles distant, reached by highway. Surface of farm, part level and part rolling. Soil, fertile. Acres in meadow, 50; in natural pasture, 123; in timber, 60, maple, hemlock, chestnut and oak; acres tillable, 173. Fruit, 80 apple, 9 pear, 8 plum, also 6 cherry trees, also currants. Best adapted to corn, oats, potatoes, buckwheat and grass. Fences, rail and wire, in good condition. House, 36x26, extension, 34x26, woodshed, 20x30, 15 rooms, good cellar. Barn with basement, 40x70, horse barn attached; barn, 20x40; hen house, hog house, ice house, silo, milk house, with concrete floor and vat, 10x16. Watered, house and barn by running water; fields by lake, brook and springs. Brocket Lake adjoins the farm, also a grove. Occupied by owner. Reason for selling, advance age of owner. Price, \$25 an acre. Terms  $\frac{1}{2}$  cash, balance on mortgage. Address Edward T. Loomis, owner, Bainbridge, N. Y., R. D. 4.

No. 215.—Farm of 200 acres; located 5 miles from Oxford P. O., and railway station, on line of N. Y., O. & W. R. R.;  $\frac{3}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches, milk collected at the door. Highways, hilly, but exceptionally good. Nearest city, Norwich, population 8,560, 14 miles distant, reached by highway. General surface, part level and part rolling. Altitude, 925 feet. Nature of soil, loam. Acres that can be used as meadow, 125; in natural pasture, 50; in timber, 25, mostly hemlock, some hardwood. Almost all of the pasture land could be plowed, if desired. Acres tillable, 175. Fruit, 50 apple trees, and other fruits. Best adapted to potatoes.

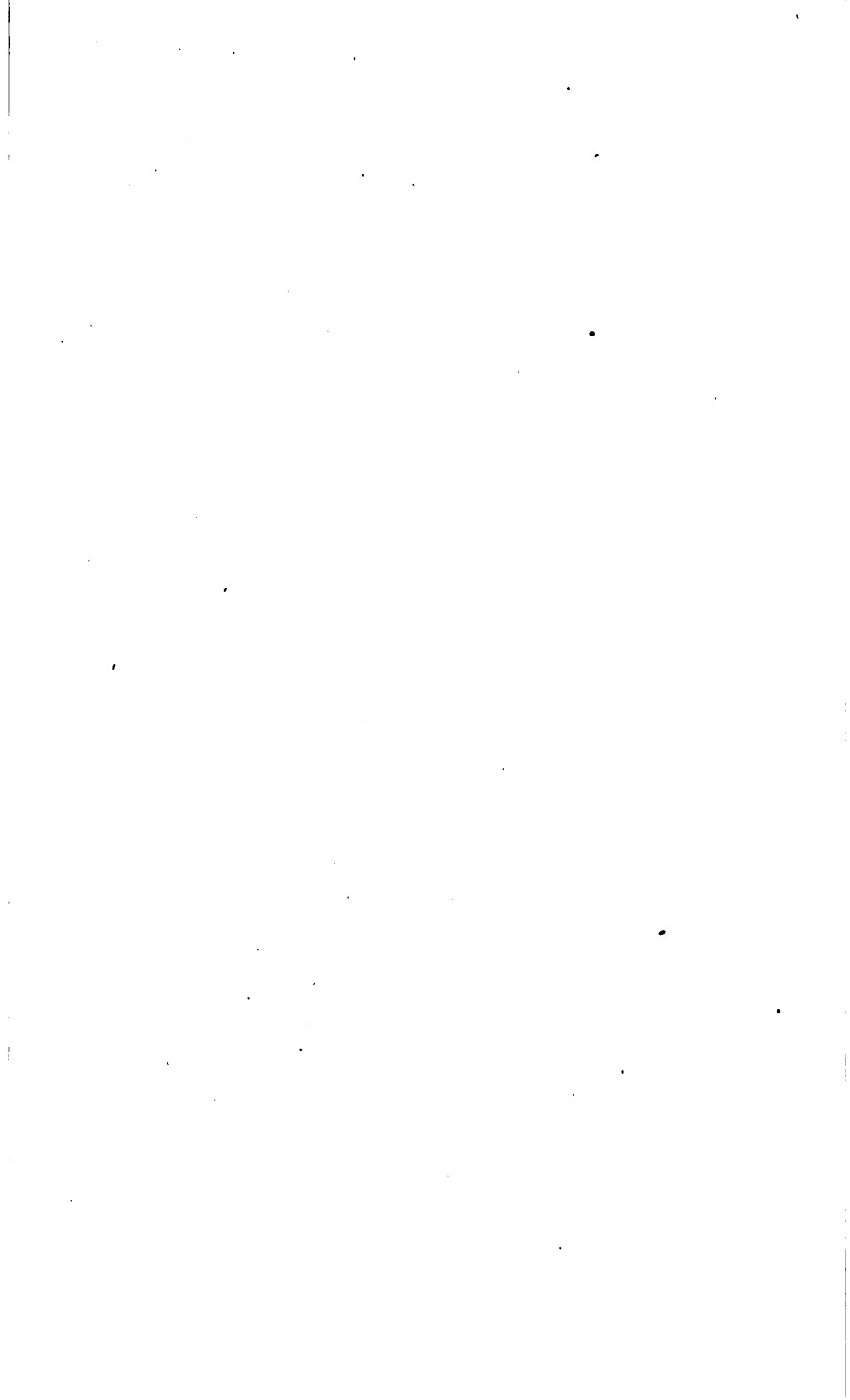


FIG. 262.—HOUSE ON FARM NO. 210, TOWN OF NORWICH,  
CHENANGO COUNTY.



FIG. 263.—HOUSE ON FARM NO. 207, TOWN OF NORTH NORWICH, CHENANGO  
COUNTY.





oats, corn, buckwheat and cabbage. Fences, wire and rail, good condition. House, fine, 2-stories, 17 rooms, porch across front and sides, painted white. Outbuildings: 3-story basement barn, 75x45, good condition; poultry house; corn house and ice house. House watered by running water, barns same, fields by creek and lake. Farm borders on one side of pretty little lake, which is surrounded by woods, making it attractive for campers. Occupied by owner. Reason for selling, other business. Price, \$4,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage, 5%. Will also sell with farm 15 good cows, 7 head of young stock, 2 horses, hay and forage, 200 hens and all farming tools and machinery for \$6,000. Terms,  $\frac{1}{2}$  cash. Address J. K. Crawford, owner, R. D. 1, Bainbridge, N. Y., or Darwin H. Craig, agent, Afton, N. Y.

**TOWN OF PHARSALIA**

**Population 657**

No. 216.— Farm of 90 acres; located 2 miles from North Pharsalia P. O., and 9 miles from railway station at Cincinnati, on line of D., L. & W. R. R.; 1 mile from school; 2 miles from Methodist church; 2 miles from butter factory; 2 miles from cheese factory and 14 miles from condensing plant. Highways, good, state road part of the way. Nearest city, Norwich, population 8,560, 14 miles distant, reached by highway. General surface, level and sloping. Altitude, 1,700 feet. Nature of soil, loam. Acres that can be used as meadow, 33; in natural pasture, 35; in timber, small grove, maple. Acres tillable, 80. Fruit, pears, apples, plums, cherries and currants. Best adapted to corn, potatoes and small grains. Fences, wall and different kinds of wire. House, 13 rooms, with metal roof, newly painted. Outbuildings: good basement barn, good horse barn with concrete floor, poultry house, concrete floor. Watered, house, running water; barns, same; fields, by never failing springs. Occupied by owner. Reason for selling, old age. Price, \$2,700. Terms, easy, balance on low rate of interest. Address Carlos Atkins, owner, North Pharsalia, N. Y. Box 30.

**TOWN OF PLYMOUTH**

**Population 813**

No. 217.— Farm of 41 acres; located 5 miles from Smyrna P. O. and railway station, on line of O. & W. Ry.;

$\frac{1}{4}$  mile from school; 5 miles from churches;  $\frac{3}{4}$  mile from milk station. Highway, in good condition. Nearest city, Norwich, population 8,560, 8 miles distant, reached by rail and highway. Nature of soil, loam. Acres in timber, 1, hemlock, maple and beech. Fruit, 20 apple, 5 pear, 2 plum and 5 cherry trees. Best adapted to corn and potatoes. House, 2 stories, 13 rooms, in good condition. Barns, outbuildings, 26x60, in good condition; good tool shed, 10x30; ice house and hen house. Watered, house by running water; barns by running water; fields by running streams. Chenango River 7 miles distant. Occupied by owner. Reason for selling, other business. Price, \$3,500. Terms, \$2,000 cash, balance reasonable terms. All personal property can be bought with farm. Address E. D. Hartwell, owner. Plymouth, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

**TOWN OF PRESTON**

**Population 649**

No. 218.— Farm of 100 acres; located 1 mile from Preston P. O., R. D. 2; 7 miles from railway station at Oxford, on line of D., L. & W. R. R.;  $1\frac{1}{2}$  miles from school; 3 miles from Methodist church, and 7 miles from milk station and condensery. Highways, good. Nearest village, Oxford, population, 1,654 reached by highway. Surface of farm, rolling. Soil, loam with hardpan. Acres in meadow, 40; in natural pasture, 50; in timber, 10; hard wood; acres tillable, 40. Fruit, apples. Best adapted to grain and fruit. Fences, stone and wire, fair condition. House, poor. No outbuildings. Occupied by tenant. Reason for selling, owner does not live in State. Terms given on application. Address Bertha A. Spaulding, owner, Solomon, Kansas.

**TOWN OF SHERBURNE**

**Population 2,683**

No. 219.— Farm of 56 acres; located 3 miles from Sherburne P. O., R. D. 3, and railway station at Sherburne, on line of D., L. & W. Ry.; 200 feet from school; 3 miles from churches of all denominations; 3 miles from butter and cheese factories; 3 miles from milk station and 12 miles from condensing plant. Highway, good. Nearest city, Norwich, population, 8,560, distant 12 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil,

gravelly loam. Acres in meadow, 31; pasture, 15; timber, 10, maple, beech and hemlock. Fruit, 20 apple, 1 plum and 1 cherry trees. Best adapted to potatoes, cabbage and corn. Fences, wire, good condition. House, 2 stories, 8 rooms, good condition. Barns, 24x46, in good condition; hen house and hog house; new silo. Watered, house by running water; water near barn. Chenango river 3 miles distant. Occupied by owner. Reason for selling, other business. Price, \$1,900. Terms, \$1,200 cash, balance on easy terms at 5%. Address Frank Hughes, owner, Sherburne, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

No. 220.—Farm of 214 acres; located 3 miles from Sherburne P. O., R. D. 1, and railway station, on line of D., L. & W. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches of all denominations; 3 miles from butter factory and milk station. Highway, hilly. Nearest city, Norwich, population 8,560, 14 miles distant, reached by rail and highway. General surface of farm, rolling. Nature of soil, loam. Acres in timber, 10, maple and beech. Fruit, 100 apple, 12 pear and 1 cherry trees. Best adapted to potatoes, cabbage, corn and oats. Fences, wire. House,  $1\frac{1}{2}$  stories, 10 rooms, in good condition. Barn, 30x80, in good condition; barn, 26x36; hay barn, hen house, ice house, milk house, wagon shed, good hop house. Watered, house by running water; barns by running water; fields by springs and streams. Chenango river 3 miles distant. Occupied by owner. Reason for selling, other business. Price, \$7,000. Terms, \$3,500 cash, balance easy terms at 5%. Address Christopher Gaines, owner, Sherburne, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

No. 221.—Farm of 62 acres; located 3 miles from Sherburne P. O., R. D. No. 1, and railway station, on line of D., L. & W. R. R.;  $\frac{1}{4}$  mile from school, 3 miles from churches and milk station. Highways in good condition. Nearest city, Norwich, 15 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 32; in natural pasture, 20; in timber, 6. Fruit, 13 apple trees. Best adapted to cabbage, potatoes, oats and corn. Fences, barbed wire. House, 2 stories, 14 rooms, good condition. Outbuildings, barn, 42x46,

good condition. Watered by well and spring. Occupied by tenant. Price, \$2,300. Terms, \$1,000 cash, balance in reasonable time at 6%. Address Frank Lobdell, owner, Sherburne, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

No. 222.—Farm of 154 acres; located  $4\frac{1}{2}$  miles from Sherburne P. O., R. D. No. 3, and railway station, on line of D., L. & W. R. R.;  $\frac{1}{4}$  mile from school;  $4\frac{1}{2}$  miles from churches and milk station. Highways, good. Surface of farm, rolling. Soil, loam. Acres in natural pasture, 100; in timber, 40, hemlock, maple, beech, ash, pine and basswood. Fruit, apples. Best adapted to cabbage, potatoes, corn and oats. Fences, mostly wire. House,  $1\frac{1}{2}$  stories, 9 rooms, good condition. Running water at house and barns. Occupied by owner. Price, \$3,500. Terms, \$2,000 cash, balance on easy terms at 6%. Address Geo. Sherdon, owner, Sherburne, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

#### TOWN OF SMITHVILLE

Population 949

No. 223.—Farm of 150 acres; located 4 miles from P. O. and railway station at Smyrna on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches at Beaver Meadow; 2 miles from butter and cheese factory; 4 miles from milk station;  $\frac{1}{4}$  mile from condensing plant. Highways, mostly State road; part hilly dirt roads. Nearest city, Norwich, population 8,560, 12 miles distant, reached by highways. Surface of farm, 40 acres level, 110 sloping. Soil, clay and gravel loam. Acres in meadow, 80; in pasture, 60; in timber, 10, enough saw timber for farm and 200 sugar maple trees; acres tillable, 100. Fruit, 60 apple trees. Best adapted to oats, peas, potatoes, ensilage and hay. Fences, mostly wire. House, 8 rooms, recently painted and remodeled. Outbuildings, main barn, 30x85, with basement; 25 stanchions and 4 single stalls; in good condition. Watered, house, by running water nearby; barn, by running water; fields, by springs. This farm is located about 1 mile from Canasawacta Creek, a good trout stream. Occupied by tenant. Reason for selling, ill health of owner's wife. Price, \$2,200. Terms on application. Address Glennie Phillips, owner, Utica, N. Y., or R. A.



FIG. 264.—HOUSE ON FARM No. 221, TOWN OF SHERBURNE, CHENANGO COUNTY.



Borland, agent, Room 3, Cook Block,  
Norwich, N. Y.

## TOWN OF SMYRNA

Population 1,205

No. 224.—Farm of 216 acres; located 2 miles from Smyrna P. O.; and railway station on line of N. Y., O. & W. R. R.; 2 miles from school; 2 miles from Protestant churches;  $\frac{1}{2}$  mile from milk station; 6 miles from condensing plant. Highways, good. Nearest city, Norwich, population 8,560,  $9\frac{1}{2}$  miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,150 feet. Soil, mostly gravelly loam. Acres in meadow, 70; acres tillable, 125. Fruit, 160 apple trees. Best adapted to cabbage, corn, oats, potatoes, wheat, rye, etc. Fences, good. House, 15 rooms, in good condition. Outbuildings, barn, 40x75, with concrete basement, will accommodate 38 head of stock; also 125-ton silo. Watered, house, by well; fields, by springs. This farm is located near a fine trout stream. Price, \$6,500. Terms on application. Address L. Ferris, owner, Norwich, N. Y., or R. A. Borland, agent, Room 3, Cook Block, Norwich, N. Y.

No. 225.—Farm of 166 acres; located  $\frac{1}{2}$  mile from Sherburne Four Corners P. O. and railway station on line of O. & W. R. R.;  $\frac{1}{4}$  mile from school;  $4\frac{1}{2}$  miles from churches of all denominations;  $\frac{1}{4}$  mile from butter factory and milk station; 9 miles from condensing plant. Highway, good. Nearest city, Norwich, population 8,560, 9 miles distant, reached by rail and highway. General surface of farm rolling. Nature of soil, loam. Acres in pasture, 90; in timber, 25. Fruit, 50 apple, 4 pear, 6 plum and 10 cherry trees. Best adapted to cabbage, corn, oats, wheat and potatoes. Fences, wire, House, 3 stories, 18 rooms, in good condition. Barn, 32x62, in good condition; shed, 20x60; horse barn, 36x44, in fair condition. Watered, house by running water; barns by running water; fields by springs. Chenango River 3 miles distant. Occupied by owner. Reason for selling, old age. Price \$8,000. Terms, \$3,000 cash, balance on time at 5%. Address Wesley Wilber, owner, No. Norwich, N. Y., or Geo. L. Sholes, agent, Sherburne, N. Y.

## CLINTON COUNTY

Area, 1,092 square miles. Population, 48,230. Annual precipitation, 42.47 inches. Annual mean temperature, 46.8°. Number of farms, 3,608. County seat, Plattsburg. This county lies in the northeast corner of the State, bounded on the eastern side by Lake Champlain.

The surface is generally hilly and broken, and in the southern and western parts mountainous. The county is rich in deposits of magnetic iron ore of the best quality. A part of the central and western portions of the county is covered by the original forests. Along the lake shore the surface is level or moderately uneven. Drift deposits in the northern and eastern parts are abundant, also peat bogs.

The soil is a clay and sandy loam and many fine farms are found in this county. The chief rivers of the county are Ausable, Little Sable, Salmon, Saranac, Little Chazy, Great Chazy and the English. Upon all of these rivers and streams are numerous falls furnishing an immense amount of water power. In the western wilderness portion are many famous lakes, the principal of which are the Chateaugay, Chazy, Sampson and Taylor. This section is a great resort for hunters, game and fish being found in abundance. Plattsburg, the county seat, has a population of 11,000, and furnishes a good local market. The United States military post is located at Plattsburg and the Dannemora State Prison is located in the county. There is a large business carried on in lumbering, mining, iron making and for the area covered a remarkable showing in agriculture. There are great possibilities for apple growing in this county along the east lake shore. The principal agricultural products are as follows: corn, 154,628 bushels; oats, 643,439 bushels; barley, 32,853 bushels; buckwheat, 102,933 bushels; potatoes, 1,325,041 bushels; hay and forage, 103,362 tons. The value of all farm property is \$18,116,645, showing a remarkable increase of 50.3 per cent. over the value in 1900. The average value of unimproved land is \$3.40 per acre. Number of dairy cows reported, 25,032; horses, 10,415; swine, 11,563; sheep, 11,069; poultry, 98,617. The total milk production was 10,188,024 gallons. The receipts from sale of dairy products was \$779,834. The

average price of improved farm land, including buildings, \$31.37 per acre. There are 185 district schools, several excellent high schools and a State Normal College located at Plattsburg. Churches of all denominations are located in the villages and country districts. There are thirteen agricultural organizations, namely, one county fair association, eleven granges, one Pomona grange. Also 64 miles of State county roads and 947 miles of other improved highways. The D. & H. railroad traverses the eastern boundary of the State and extends through other portions of the county, giving unusual facilities in connection with the water transportation of the lake, for the products that are grown, manufactured or mined in the county.

## TOWN OF AUSABLE

Population 2,045

No. 226.—Farm of 135 acres; 1 mile from Arnold station; 2 miles from Clintonville P. O. Loamy soil, adapted to general farming. Fine scenery. Good trout fishing. Deer and other game. Watered by springs. Well fenced. Forty-five acres timber, balance meadow and pasture. Good orchard. Two-story frame house of 10 rooms, in fine repair. Water and bathroom in house. Large barn, stable and outbuildings, all in good condition. This farm would make a good poultry farm. Near a good market. Reason for selling, advanced age of owner. Price, \$3,000. Easy terms. Name and address of owner, John Pat-  
 tinson, owner, Clintonville, N. Y.

No. 227.—Farm of 80 acres; located 1 mile from Harkness P. O., R. D. No. 3, and railway station, on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches; 1 mile from butter factory, and  $1\frac{1}{2}$  miles from cheese factory. Highways, good. Nearest village, Peru, 5 miles distant, reached by rail and highway. General surface level. Altitude 1,000 feet. Nature of soil, sandy loam and some clay loam. Acres that can be used as meadow, 35; in natural pasture, 30; in timber, 15, white pine and hardwood. Acres tillable, 35. Fruit, 50 apple, 15 plum, 40 cherry and 5 pear trees. Best adapted to all farm crops. Fences, wire; good condition. House,  $1\frac{1}{2}$  stories, 10 rooms, good condition. Outbuildings, large barn, granary, hog house, shed for five horses, cow barn, large shed, all in first class condition. House watered by well; barns by spring and brook; fields by springs. Reason for selling, wishes to retire. Price, \$2,800. Terms, easy. Address, John H. Ryan, owner, Harkness, N. Y. Owner will rent with option to buy.

No. 228.—Farm of 20 acres; located at Kesseville, on line of K. A. C. & L. C. R. R. and D. & H. R. R.; 6 miles from

churches. Highways, State road. Surface of farm, level. Altitude, 1,000 ft. Soil, sandy loam. House, barns and other buildings with land cost \$22,000. All buildings remarkably well built. Price, \$10,000. Address, Geo. W. Smitu, owner, Keeseville, N. Y.

## TOWN OF BEEKMANTOWN

Population 1,866

No. 229.—Farm of 125 acres; located 3 miles from Plattsburg P. O., R. D. 5;  $1\frac{1}{2}$  miles from railway station at Beekmantown, on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches, butter factory and cheese factory; 2 miles from milk station. Highways, 2 State and 1 county roads. Surface of farm, rolling. Soil, muck and gravel. Acres in meadow, 50; in natural pasture, 30; in timber, 15, maple and cedar. Acres tillable, 80. Fruit, 200 apple trees. Best adapted to corn, clover, alfalfa and general crops. Fences, wire and rail, fair condition. House, 12 rooms, brick, fair condition. Outbuildings, 7 barns. Watered, house by well and cistern, barns and fields by spring. This farm is 3 miles from Lake Champlain. Occupied by owner. Reason for selling, owner wishes to retire from business. Price, \$5,500. Terms, \$1,000 cash, balance in small annual payments. Address, Frank A. Wolcott, owner, Plattsburg, N. Y., R. D. 5.

## TOWN OF CHAZY

Population 2,973

No. 230.—Farm of 200 acres; located  $2\frac{1}{2}$  miles from Chazy P. O., R. D. and railway station on line of D. & H. R. R.;  $2\frac{1}{2}$  miles from school and churches;  $2\frac{1}{2}$  miles from milk station. Highways, State road. General surface, rolling and level. Nature of soil, clay loam. Acres in timber, 15, hardwood, maple. Acres tillable,  $\frac{2}{3}$  of farm. Fruit, 50 apple trees, 3 pear. Best adapted to hay and grain. Fences, mostly wire, fine condition. House, brick,  $1\frac{1}{2}$  stories, with wing of kitchen and shed. Outbuild-

ings: 1 barn, 53x100; barn, 30x40, with basement stable for 30 cows, fine condition; granary; poultry house and silo. One hundred rods from shores of Lake Champlain. Occupied by tenant. Reason for selling, ill health of owner. Price, \$15,000. Terms, \$5,000 cash, balance on mortgage. Address, Wm. D. Savage, owner, Plattsburg, N. Y., or Agnew & Agnew, Brokers, Plattsburg, N. Y.

No. 231.—Farm of 50 acres; located 1½ miles from West Chazy P. O., R. D. No. 1, and railway station on line of D. & H. R. R.; 1 mile from school; 1½ miles from churches; 1½ miles from butter factory and milk station. Nearest city, Plattsburg, population 11,138, 8 miles distant, reached by rail or highway. General surface, rough. Acres in meadow, 25; in pasture, 20; in timber, 5, second growth. Fruit, 75 apple trees; 30 cherry. Best adapted to barley, oats and potatoes. Fences, rail and wire. House, log, fair condition. Barn, fair condition. House and barn watered by well. Occupied by owner. Reason for selling, wishes larger farm. Price, \$1,250. Terms cash. Address, Wm. Gregware, owner, West Chazy, N. Y., or Champlain Valley Farm Agency, Brokers, West Chazy, N. Y.

#### TOWN OF PLATTSBURGH

Population 2,362

No. 232.—Farm of 90 acres; located 1½ miles from Plattsburg P. O., and 2 miles from railway station, on line of D. & H. R. R.; 1½ miles from high school and public schools; 1½ miles from churches; 2 miles from butter factory and cheese factory. General surface of farm, level. Nature of soil, 10 acres of light soil and 40 acres of rich loam. Acres that

can be used as meadow, 40; in natural pasture, 10; in timber, 40, pine, spruce, beech and maple. Acres tillable, 50. Best adapted to hay, grain, potatoes and corn. Fences, wire and cedar rail, excellent condition. House, 26x34, hardwood floors, furnace, fine condition. Barn, 30x40 with shed and horse barn, in good condition. House watered by well, barns by well, fields by Saranac river. Lake Champlain, 2 miles distant. Saranac river on edge of farm. Occupied by tenant. Reason for selling, to settle an estate. Price, \$5,300. Terms, \$2,000 cash, balance on mortgage. Address, Clinton Goodsell, owner, Fairfax, Vt., or Agnew & Agnew, brokers, Plattsburg, N. Y.

#### TOWN OF SCHUYLER FALLS

Population 1,588

No. 233.—Farm of 89 acres; located 1½ miles from Morrisville P. O., R. D. No. 1, and railway station on line of D. & H. R. R.; ½ mile from school and churches; 1½ miles from butter factory; 6 miles from milk station. Nearest city, Plattsburg, population, 11,138, 7 miles distant; reached by highway. General surface, rolling. Nature of soil, clay, loam and sand. Acres in meadow, 50; in pasture, 25; in timber, 14, pine, white birch and some poplar. Acres tillable, 50. Fruit for home use. Fences, rail, fair condition. House, 26x36; wing, 26x20, fair condition. Outbuildings: barn, 30x40; another 30 x40; two sheds, all in good condition. House and barns watered by well; fields by brook. Occupied by owner. Reason for selling, has another farm. Price, \$4,000. Terms, one-half down, balance easy. Will rent with option to buy. Address, O. G. Adcock, owner, Morrisonville, N. Y.

#### COLUMBIA COUNTY

Area, 688 square miles. Population, 43,658. Annual precipitation, 46 inches. Annual mean temperature, 50°. Number of farms, 2,963. County seat, Hudson. Average price of farm land per acre, \$42.60. This is an increase of 31.6 per cent. in ten years.

The county lies on the east shore of the upper Hudson and extends east to the line of Massachusetts. The Taghkanick Mountain extends along the east border and the adjoining parts of the county are broken by irregular ranges of hills which constitute the outlying spurs of these mountains. The western portion of the county spreads out in an undulating plateau terminating in the bluffs of the Hudson river. The principal streams are the Janssenkill, Claverack, and Kinderhook creeks. These streams and their tributaries have valuable water powers and prosperous mills are located on them. In the northern portion of the county are numerous lakes and ponds all well stocked with fish. Thermal and mineral springs are found in places, the former, quite celebrated, located at New Lebanon. The various branches of

agriculture form the leading industrial pursuits of the people. At the same time there are manufactured to a large extent paper and cotton fabrics, vegetable extracts and iron. The county is most favorably situated for commerce, as the largest ships can dock at Hudson. The principal crops are: Corn, 410,576 bushels; oats, 503,088 bushels; buckwheat, 81,073 bushels; rye, 230,195 bushels; potatoes, 232,702 bushels; hay and forage, 89,208 tons. Columbia county ranks first in the production of rye and the demand for rye straw in New York city, together with the cheapness of transportation makes this product almost as valuable as the grain itself. The live stock of the county is classified as follows: Dairy cows, 16,136; horses, 9,150; swine, 13,091; sheep, 25,229; poultry, 173,879; production of milk, 7,772,732 gallons. Receipts from sale of dairy products was \$714,274. This county is a choice location for the raising of apples and other orchard fruits.

The soil survey recently made by the United States Government affirms that the county has a soil and climate equal to any portion of the State for orcharding. Railway and electric lines, together with good roads, make ample facilities for shipping products. There are 150 district schools; churches of all denominations are established in the villages and through the rural sections. There are twenty agricultural organizations established in the county. The total valuation of farm property is \$19,819,369, an increase of 31.6 per cent. in ten years. The prosperity of the farmers in this county is noted by an increase of nearly \$2,500,000 in the value of farm buildings alone.

#### TOWN OF ANCRAHAM

Population 1,137

No. 234.—Farm of 217 acres; located 2 miles from Ancram Village, P. O., R. D. 1, and railway station, on line of Central New England R. R.;  $\frac{1}{2}$  mile from school; 2 miles from Protestant churches and milk station. Highways, good. Nearest city, Hudson, population 11,417, 18 miles distant. Surface of farm, rolling and level. Soil, limestone and loam. Acres in meadow, 20; in timber, 19, oak, chestnut and hickory. Acres tillable, 178. Fruit, 500 apple trees, also pears, plums, quinces, cherries and grapes for home use. Best adapted to rye, corn, oats and hay. Fences, stone wall and rail, good condition. House, 18 rooms, 2 fireplaces, good condition. Outbuildings, newly painted grain barn, 40x36; hay barn, 24x100; hay barn, 18x36; carriage house and garage, 20x36, all in good condition. Watered, house, by well and cistern; barns, by running water; fields, by streams. Occupied by owner. Reason for selling, poor health of owner. Price, \$14,000. Terms, \$7,000 down, balance on mortgage. There is a good tenant house on farm. Address Mrs. A. D. Downing, owner, Ancram, N. Y.

#### TOWN OF AUSTERLITZ

Population 811

No. 235.—Farm of 200 acres; located 1 mile from State Line P. O. and railway station, on line of B. & A. Ry.; 1 mile from school, church, butter factory and milk station. Highways, good.

Surface of farm, rolling. Altitude, about 500 feet. Soil, heavy loam. Acres in meadow, 100; in natural pasture, 50; in timber, 50. Acres tillable, 100. Large quantity of fruit of all kinds. Best adapted to hay. Large house, 14 rooms. Large barns in first-class condition. Watered by brook and spring. Occupied by owner. Reason for selling, owner wants smaller farm. Price, \$8,000. Terms, \$5,000 cash. Address Norman Bailey, owner, State Line, Mass., or S. N. Loomis, agent, Chatham, N. Y.

No. 236.—Farm of 120 acres; located 1 mile from Chatham P. O. and railway station, on line of Boston & Albany R. R.; 1 mile from school, churches, butter factory, milk station and condensing plant. General surface,  $\frac{1}{2}$  of this farm is level. Altitude, 500 feet. Nature of soil, loam. Acres in meadow, 100; in natural pasture, 10; in timber, 10. Acres tillable, 100. Best adapted to grain and hay. Fences, wire and board, good condition. House, 2 stories, 12 rooms, good condition. Outbuildings: 4 large barns; good condition; hog pens and 2 poultry houses. Watered, house and barn by running water; fields by springs. Occupied by owner. Reason for selling, old age and poor health. Price, \$12,500. Terms,  $\frac{1}{2}$  cash. Address S. N. Loomis, owner, Chatham, N. Y.

No. 237.—Farm of 170 acres; located 4 miles from railway station at Ghent, on line of Harlem Division of N. Y. C.

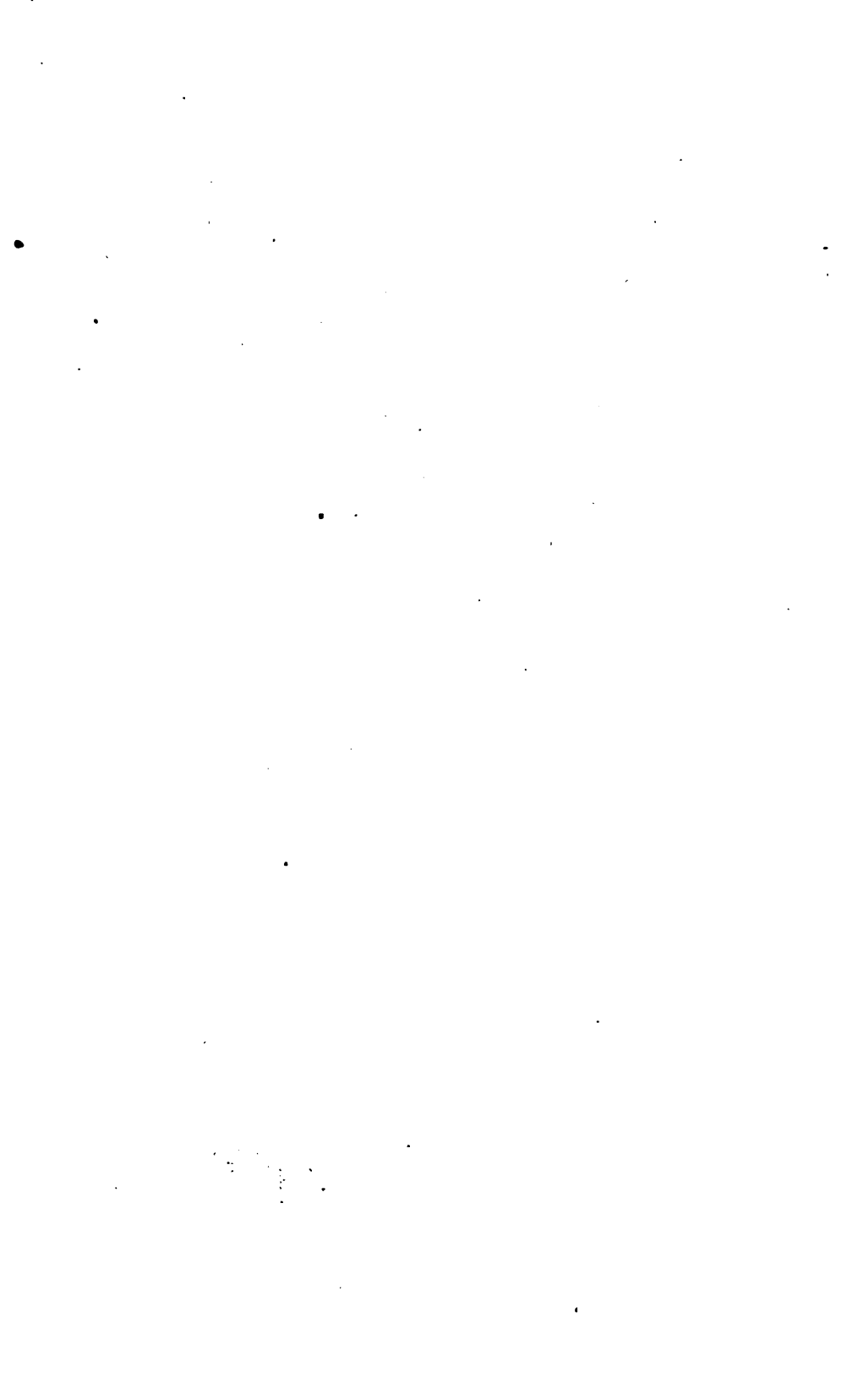


**FIG. 265.—HOUSE OF FARM NO. 237, TOWN OF AUSTERLITZ, COLUMBIA COUNTY.**



**FIG. 266.—HOUSE ON FARM NO. 239, TOWN OF AUSTERLITZ, COLUMBIA COUNTY.**





Ry. and Hudson-Chatham branch of Boston & Albany Ry. Nearest large village, Chatham, population 2,251, 6 miles distant, reached by rail and highway. Highways, somewhat hilly, but good. This farm is 1 mile from school; 2 miles from Protestant churches and creamery; 5 miles from milk shipping station. Acres in natural pasture, 60. Acres tillable, 135; acres in timber, 20, chestnut, oak, maple, etc. Occupied by owner. Large 14-room house, main part 25x40, wing 18x24, Outbuildings, main barn, 45x60, stanchions for 18 cows, stalls for 6 horses; wagon house, 26x32; hen house, 15x20; hog pen and corn house 12x24; wood house, 15x20, two stories; shop, 10x12; new tool house, 14x35; all in good condition. Daily mail at door. Watered by two wells and several springs. Adapted to dairying, poultry raising, fruit raising or general farming. Soil, clay sub-soil, no gravel or swampy land. Altitude, 800 feet. Fruit, 100 apple, 20 cherry, 20 pear and 75 plum trees; also ten large grape vines. Fences, mostly wire, some rail and wall, good condition. Reason for selling, owner unable to care for farm. Price, \$5,000. Terms, \$1,500 cash, balance on mortgage at 5% interest. Address John Freehan, owner, Ghent, N. Y., R. D. 2.

No. 238.—Farm of 20 acres; located 3½ miles from Chatham P. O. and railway station; 1 mile from school and churches; ½ mile from butter factory. State road within ¼ mile of farm. Nearest city, Albany, population, 100, 253, 24 miles distant. Surface of farm, rolling. Altitude, 800 feet. Soil, clay loam. All tillable. Fruit, 1,200 apple trees. Best adapted to fruit. House, 24x30, 6 rooms, fair condition. Watered by well. Occupied by owner. Reason for selling, owner in other business. Price, \$4,500. Terms, 60% cash. Address T. F. Niles, owner, Chatham, N. Y.

No. 239.—Farm of 100 acres; located 1 mile from Chatham P. O. and railway station, on line of B. & A. and N. Y. C. R. Rs.; ¼ mile from school; 1 mile from church and milk station; 1½ miles from butter factory. Highways, State road. Surface of farm, level. Altitude, 300 feet. Soil, loam. Acres in meadow, 90; in natural pasture, 10. All tillable. Fruit, 75 trees. Adapted to any crop grown in this climate. Fences, wire

and wood, good condition. House, 12 rooms. Outbuildings, in good condition. Watered, house and barns, by running water; fields, by brook and springs. Occupied by owner. Reason for selling, ill health and advanced age of owner. For price and terms address S. N. Loomis, owner, Chatham, N. Y.

No. 240.—Farm of 196 acres; located 1 mile from Austerlitz P. O.; 3 miles from railway station at State Line, on line of B. & A. R. R.; 1 mile from school and church. Highways, good. Surface of farm, rolling. Altitude, about 900 feet. Soil, loam. Acres in meadow, 40; in natural pasture, 100; in timber, 50. Acres tillable, 100. Fruit, apples, pears and plums. House, 8 rooms, good condition. Two barns, fair condition. Watered by springs. Occupied by owner. Reason for selling, ill health of owner. Price, \$2,500. Terms, \$2,000 down. Address Wells Westover, owner, Austerlitz, N. Y., or S. N. Loomis, agent, Chatham, N. Y.

No. 241.—Farm of 560 acres; located 1 mile from Green River P. O.; 5 miles from railway station at Hillsdale, on line of N. Y. C. R. R.; 1 mile from school and church; 5 miles from butter factory and milk station. Highways, in good condition. Nearest large village, Hillsdale, 5 miles distant, reached by highway. Surface of farm, rolling. Altitude, 500 feet. Soil, loam. Acres in meadow, 200; in natural pasture, 200; in timber, 160. Acres tillable, 200. Fruit, mixed varieties. Best adapted to hay and stock. Fences, wood and wire. House, in fair condition. Large barn, in fair condition. Watered, house and barn, by water piped from spring; fields, by springs and brooks. Occupied by tenant. Reason for selling, to close an estate. Price, \$12 per acre. Terms easy. Address George I. Chase, owner, Spencertown, N. Y., or S. N. Loomis, agent, Chatham, N. Y.

#### TOWN OF CANAAN

Population 1,167

No. 242.—Farm of 260 acres; located 3 miles from East Chatham P. O. and railway station, on line of Boston & Albany R. R.; 3 miles from school; 1 mile from churches; 3 miles from cheese factory and milk station. General surface, rolling. Altitude, 1,200 feet. Acres in meadow, 100;

in natural pasture, 100; in timber, 60. Best adapted to rye and sheep raising. House, 10 rooms, in good condition. Outbuildings, good. House, watered by well, barns and fields by springs. Occupied by owner. Reason for selling, too large for owner. Price, \$3,600. Terms, \$2,500 down, balance on mortgage. Address James Asleer, owner, East Chatham, N. Y., or S. N. Loomis, agent, Chatham, N. Y.

No. 243.—Farm of 85 acres; located  $1\frac{1}{4}$  miles from Canaan P. O. and railway station, on line of Boston & Albany R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{4}$  miles from churches. General surface, rolling. Altitude, 1,100 feet. Nature of soil, loam. Acres in meadow, 60; in pasture, 10; in timber, 10. Acres tillable, 75. Fruit, quantities of all kinds. Best adapted to rye, hay and potatoes. Fences, wire and rail. Large house, with steam heat. Outbuildings; horse barn and hay barn, in good condition. House watered by well, barns by spring and fields by brook. Occupied by owner. Reason for selling, old age. Price, \$5,000. Terms,  $\frac{1}{2}$  down. Address G. Gorton, owner, Canaan, N. Y., or S. N. Loomis, agent, Chatham, N. Y.

#### TOWN OF CHATHAM

Population 33,306

No. 244.—Farm of 115 acres; located 1 mile from Chatham P. O. and railway station, on line of Boston & Albany railway; 1 mile from school; 1 mile from churches; 1 mile from butter factory and milk station. General surface, rolling. Altitude, 500 feet. Nature of soil, loam. Acres in meadow, 100; in natural pasture, 5; in timber, 5. Acres tillable, 100. Best adapted to hay and grain. Fences, wire and rail. House, 2 story, in good condition. Outbuildings, fine barn, 100x40, room for 40 cows. House watered by running water; barns, by brook. Occupied by tenant. Reason for selling, other business. Price, \$5,500. Address H. T. B. Loomis, owner, Chatham, N. Y., or S. N. Loomis, agent, Chatham, N. Y.

No. 245.—Farm of 225 acres; located  $\frac{3}{4}$  mile from Old Chatham P. O. and railway station, on line of Rutland R. R.;  $\frac{1}{4}$  mile from school;  $\frac{3}{4}$  mile from Methodist church;  $2\frac{1}{4}$  miles from cheese factory; milk collected at the door. Highways, well kept gravel

road. Nearest city, Albany, population 100,253, 20 miles distant, reached by rail or highway. General surface, some level, some hilly, largely rolling. Nature of soil, limestone and gravelly loam. Acres that can be used as meadow, 15; in natural pasture, 25. Acres tillable, 185. Fruit, 50 apple, 15 cherry trees, plums and pears for family use. Best adapted to hay, corn, oats and rye. Fences, wire, excellent condition. House, new, modern, 8 rooms. Outbuildings: large cyclone basement; barn, concrete floor, 28 stanchions; horse barn, silo, milk house, poultry house, ice house. House piped from spring; barns piped from spring, and fields by springs. Occupied by tenant. Reason for selling, to settle an estate. Price, \$10,000. Terms, one-half cash balance on mortgage. Address Frances V. Van Ness, owner, Chatham Center, N. Y.

No. 246.—Farm of 170 acres; located  $\frac{1}{2}$  mile from North Chatham P. O.;  $\frac{1}{4}$  mile from railway station at North Chatham, on line of A. & S. Ry.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from Protestant church. Highways, good. Nearest city, Albany, population 100,253, 13 miles distant, reached by rail. Surface of farm, most level. Soil, gravel and limestone. Acres in meadow, 25; in timber, 25, hemlock, pine, oak and maple. Acres tillable, 120. Fruit, 125 apple trees. Fences, wire, board and wire. Large double house, in good condition. Outbuildings, two barns, corn house, sheds and wagon house. Watered, house by well and cistern; barns and fields by springs and streams. Occupied by owner. Reason for selling, owner has two other farms. For price and terms, address Dudley Walker, owner, North Chatham, N. Y.

No. 247.—Farm of 156 acres; located 1 mile from North Chatham, schools, churches and Albany & Southern R. R.; 2 miles from State road leading from Albany to Nassau. Soil, limestone. Surface of farm, rolling. Fruit, three apple orchards, two in bearing. Large double house. Large basement barn, 2 stories; concrete cow stable; milk house with running spring water for cooling milk; shed 40 feet long for young stock or sheep; two wagon houses and corn house. For price and terms, address Dudley Walker, owner, North Chatham, N. Y.

## TOWN OF CLAVERRACK

Population 4,114

No. 248.—Farm of 96 acres; located 500 feet from Mellenville P. O. and railway station, on line of B. & A. branch railway;  $\frac{1}{8}$  mile from school;  $\frac{1}{16}$  mile from Dutch Reformed church;  $\frac{1}{4}$  mile from butter factory and milk station. Highways, good. Nearest city, Hudson, population 11,417, 8 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, gravel. Acres in meadow, 60; in natural pasture, 36. Acres tillable, 80. Fruit, a few apple trees. Best adapted to hay and grain. Fences, wire and rail, poor. House, brick, 2 stories and basement, 35x60, good condition. Outbuildings, large new barn, 30x40, and wagon house, 18x30, good condition. Watered, house by well, barn by stream, fields by stream and spring. Mellenville stream runs through farm, never dry. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,750. Terms, easy. Address W. J. Delamater, owner, Hudson, N. Y.

No. 249.—Farm of 5 acres; located  $\frac{1}{16}$  mile from Mellenville P. O. and railway station, on line of Boston & Albany R. R.;  $\frac{1}{8}$  mile from school;  $\frac{1}{4}$  mile from Reformed church;  $\frac{1}{4}$  mile from milk station and 3 miles from condensing plant. Highways, good. Nearest city, Hudson, population 11,417, 8 miles distant, reached by rail and highway. General surface, rich loam and sand. Acres in meadow, 3. Fruit, apples, pears and grapes. Best adapted to gardening. Fences, picket. House, 2 story with 2 story wing, in good condition. Outbuildings: barn, 18x30, and smoke house. Land bordered by Claverack creek. Occupied by owner. Reason for selling, to settle an estate. Price, \$2,800. Terms, cash or good security. Address Mrs. Marv Van Buren, owner, Mellenville, N. Y.

No. 250. — Farm of 316 acres; located  $1\frac{1}{2}$  miles from Philmont P. O. and railway station, on line of Harlem Division of the N. Y. C. R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from churches; 2 miles from butter factory and 2 miles from milk station. General surface, mostly level. Altitude, 700 feet. Nature of soil, mostly loam. Acres in meadow, 250; in natural pasture, 50; in timber, 16. Acres tillable, 250. Fruit for family use. Best adapted to hay, potatoes and

corn. Fences, wire and rail. House, 14 rooms, in good condition. A couple of outbuildings, in good condition. House, barns and fields, watered by brook and running water. Occupied by tenant. Reason for selling, other business. Price, \$13,500. Terms, easy. Address Refine Rossman, owner, Philmont, N. Y., or S. N. Loomis, agent, Chatham, N. Y.

No. 251.—Farm of 200 acres; located 2 miles from Martindale P. O. and railway station, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches and milk station. Highways, good. Nearest city, Hudson, population, 11,417, 7 miles distant, reached by rail. Surface of farm, rolling. Soil, loam. Acres in meadow, 60; in natural pasture, 120; in timber, 20. Acres tillable, 180. Best adapted to grass, grain, fruit and dairying. Fences, wire, in good condition. Price, \$6,000. Terms, easy. Address Charles Hiscox, owner, Claverack, N. Y., or E. Brionne & Co., brokers, 23 Duane Street, New York, N. Y.

## TOWN OF CLERMONT

Population 800

No. 252.—Farm of 5 acres; located 5 miles from Germantown P. O., R. D. 1; 5 miles from railway station at Germantown, on line of N. Y. C. R. R.;  $\frac{1}{8}$  mile from school; 2 miles from church; 5 miles from milk station. Highways, State road. Nearest city, Hudson, population 11,417, 11 miles distant, reached by highway. Surface, level. Soil, gravelly loam. Acres in meadow, 5. About 30 to 40 fruit trees. Fences, wire, in good condition. House, in good condition. No barn, but other outbuildings. Watered by well and spring. This place is best adapted to small fruit and vegetables; also well adapted to poultry raising. It is near an electric light and power plant that is being developed at large cost. Occupied by tenant. Price, \$1,700. Terms, \$700 cash, balance on time. Address H. S. Williams, owner, Clermont, N. Y.

No. 253.—Farm of about 20 acres; located  $1\frac{1}{4}$  miles from Clermont P. O.; 6 miles from railway station at Tivoli, on line of New York Central R. R.;  $4\frac{1}{2}$  miles from C. N. E. R. R. station;  $1\frac{1}{4}$  miles from school; 3 miles from churches; 6 miles from butter factory;  $4\frac{1}{2}$  miles from milk station. Nature of highways, good. Nearest city, Hudson, population 11,417, 13 miles dis-

tant, reached by highway. Soil, limestone. Acres in meadow, 10; in natural pasture, 3. Acres tillable, 18. About 375 fruit trees. Adapted to all climatic crops; would make good poultry, fruit and dairy farm. House, in fair condition. Good-sized barn and other out-buildings, in fair condition. Watered by well. Six miles from Hudson river and boat lines. Occupied by tenant. Reason for selling, owner bought place to improve and sell. Price, \$2,400. Terms, one-half cash, balance on mortgage. Address H. S. Williams, owner, Clermont, N. Y.

No. 254.—Farm of 80 acres; located  $1\frac{1}{2}$  miles from Elizaville P. O.;  $1\frac{1}{2}$  miles from railway station at Elizaville, on line of C. N. E. R. R.; 6 miles from N. Y. C. R. R., and 6 miles from Hudson river boat lines at Tivoli; 1 mile from school;  $1\frac{1}{2}$  miles from church;  $1\frac{1}{2}$  miles from milk station. Highways, hilly. Nearest city, Hudson, population 11,417, 14 miles distant, reached by highway. Surface, part level, and some hilly. Soil, sandy loam. Acres in meadow, 30; in natural pasture, 10; in timber, 5. Acres tillable, 70. Over 100 fruit trees. Best adapted to hay, oats, fruit; would make a good poultry or dairy farm. Fences, wire and rail, in fair condition. Good-sized house, in fair condition. Large barn, in fair condition. Watered by well. Location is high and healthful. Occupied by tenant. Price, \$3,500. Terms, \$1,500 cash, balance on time. Address H. S. Williams, owner, Clermont, N. Y.

#### TOWN OF COPAKE

Population 1,283

No. 255.—Farm of 379 acres; located  $1\frac{1}{2}$  miles from railway station at Craryville, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches. General surface, 196 acres level, 50 acres hilly, 133 acres rolling, sloping south. Nature of soil, loam with a subsoil of gravel. Acres in meadow, 180; in natural pasture, 60; in timber, 50, oak and chestnut. Acres tillable, 329. Fruit, 195 apple trees and  $1\frac{1}{2}$  acres of pear trees,  $\frac{1}{2}$  acre of currants and grapes. Fences, rail, good. House, 13 rooms; tenant house, 7 rooms, fair condition. Outbuildings: main barn, 92x36, gambrel roof, 26 stanchions, 6 single stalls, 1 box stall, in good condition, and milk house. House and barn watered by wells, fields by streams. Occupied by

owner. Reason for selling, old age. Price, \$10,500. Address John Holsapple, owner, Copake, N. Y., or E. J. Webb, agent, 114 Main Street, Beacon, N. Y.

No. 256.—Farm of 200 acres; located  $2\frac{1}{2}$  miles from Hillsdale P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R. (Harlem Division);  $2\frac{1}{2}$  miles from school and churches;  $2\frac{1}{2}$  miles from butter and cheese factory and milk station. Highways, good. Nearest village, Great Barrington, Mass., population, 5,000, 12 miles distant, reached by highway or trolley. General surface, rolling. Altitude, 1,200 feet. Acres in meadow, 40; in pasture, 60; in timber, 100, all varieties. Acres tillable, 55. Fruit for home use. Best adapted to corn, potatoes and rye. House, 35x25, in good condition. Barn, 30x40, with wing, good condition. House watered by well, barn and fields by springs and stream. Occupied by tenant. Price, \$2,000. Terms, easy. Address, W. A. Mallery, owner, Hillsdale, N. Y.

#### TOWN OF GALLATIN

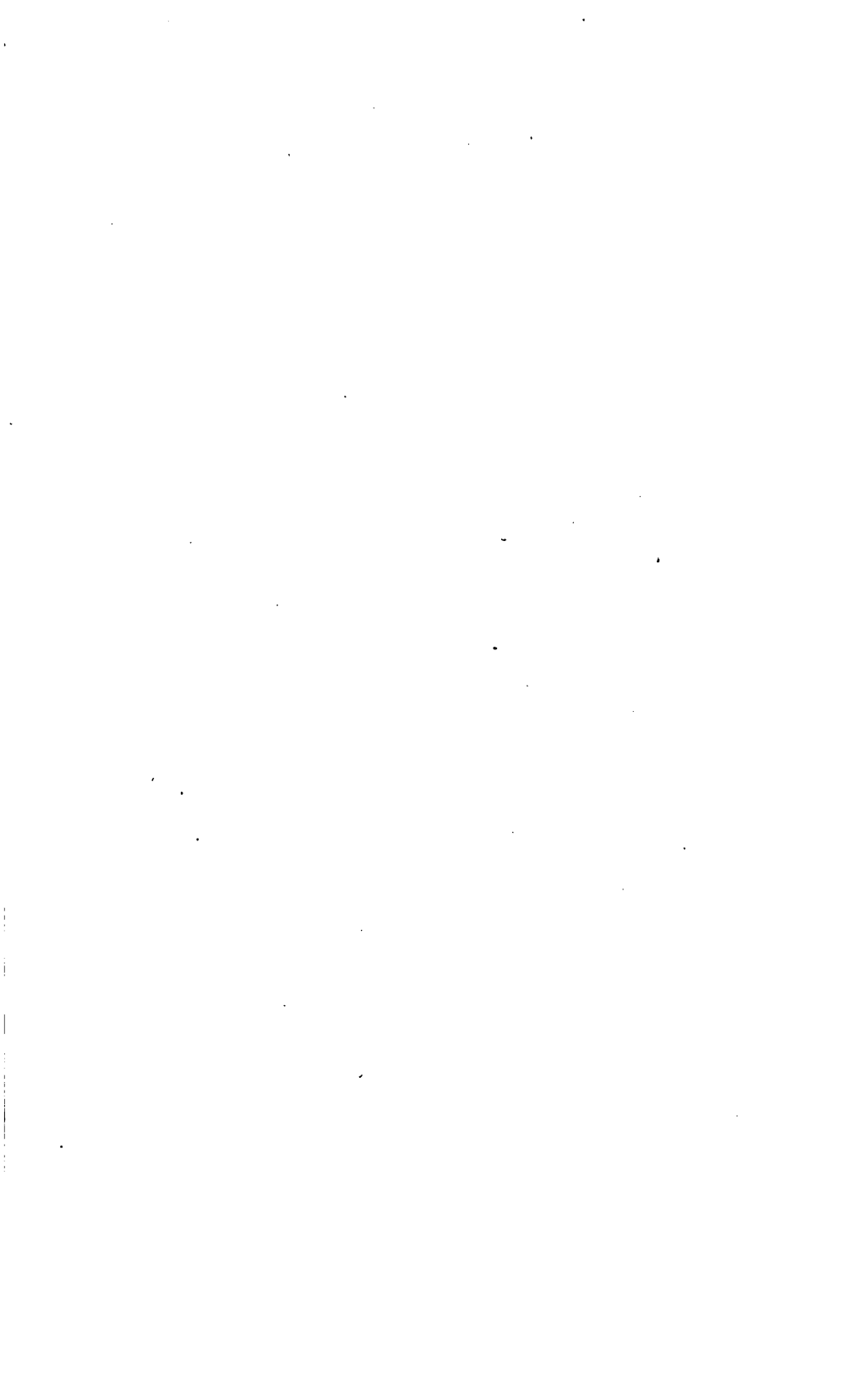
Population 720

No. 257.—Farm of 150 acres;  $2\frac{1}{2}$  miles from Jackson Corners P. O., R. D.;  $2\frac{1}{2}$  miles from Mt. Ross railway station, on line of C. N. E. R. R. Good roads. Soil, slate and loam. Acres in meadow, 50; acres tillable, 140; in timber, about 12, mostly oak and chestnut. Fruit, 200 trees, plums, peaches, apples and pears. Best adapted to corn, oats, rye, hay and potatoes. Fences, in fair condition. House, 42x30, in good condition. Barn, 54x50, in good condition. Watered, house, by well; barn, by stream and spring. Nearly all the meadow is tillable; about 8 acres not so good, but has been plowed and can be again. Reason for selling, owner does not need farm. Price, \$2,500. Terms, \$800 cash, balance on bond and mortgage at 5%. Name and address of owner, Peter J. Near, Jackson Corners, N. Y. Will rent.

No. 258.—Farm of 177 acres; located 1 mile from Elizaville P. O.;  $1\frac{1}{2}$  miles from railway station at Elerslie, on line of R. & C. Railway; 1 mile from school and Protestant church; 1 mile from milk station. Highways, good. Nearest large village, Red Hook, population 960,  $5\frac{1}{2}$  miles distant, reached by rail and highway. Surface of farm, some hilly, rolling and level. Soil, slate. Acres tillable, 100. Acres in timber, 50,



FIG. 207.—HOUSE ON FARM NO. 263, TOWN OF GHENT, COLUMBIA COUNTY.



hard wood and pine; 25 acres in natural pasture. Fruit, about 75 apple trees. Best adapted to rye, corn, oats and hay. Fences, rail, stone wall and wire, good. House, about 24x40, fair, also tenant house, 20x30, fair condition. Outbuildings: barn, 40x50; hay press house attached, 30x40; wagon house and corn crib, 20x20; hog house, 20x30, fair condition. Watered, house, by well; barn, by brook; fields, by springs and brooks. Occupied by tenant. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Address, Chas. A. Coons owner, Ft. Plain, N. Y. Will rent.

No. 259.—Farm of 285 acres, 1 mile from Jackson Corners P. O., R. D.; on line of C. N. E. R. R.; 1 mile from station, school and Methodist church. Highways, good; 5 miles from milk station. Nearest large village, Pine Plains, 5 miles distant, reached by rail and highway. Occupied by tenant. Surface of farm, rolling. Soil, sandy loam. Acres in meadow, 120; in natural pasture, 100; in timber, 35, oak, chestnut, hemlock, hickory and maple; acres tillable, 225; Fruit, 100 apple, 10 pear, 50 plum and 50 peach trees. Best adapted to corn, rye, oats and hay. Fences, stone wall, stakes and rail. House, 40x50, in good condition. Main barn, 50x40, additions, 50x18 and 50x30, in fair condition. Watered, house and barn, by running water; fields, by springs and streams. Reason for selling, owner unable to work farm. Price, \$7,000. Terms, one-half cash, balance on mortgage. Address H. H. Slickle, owner, Millerton, N. Y., or John P. Fulton, agent, Red Hook, N. Y. Owner will rent.

No. 260.—Farm of 150 acres; located 2 miles from Elizaville P. O. and railway station on line of C. N. E. Ry., 2 miles from school and Methodist church, R. D. 2 from Jackson Corners. Highways, somewhat hilly but good. Nearest city, Hudson, 18 miles distant, population 11,417, reached by rail and highway. Occupied by owner. Surface of farm rolling. Acres in meadow, 60; in natural pasture, 60; in timber, 25, oak, hickory, chestnut and pine. Acres tillable, 125. Soil, gravel. Fruit, 2,000 apple, 500 pear and 50 cherry trees. Best adapted to fruit, hay and grain. Fences, stone wall and rail. Watered, house, by spring; barn, by running water, fields, by spring. Price, \$8,500. Terms, \$3,500 cash, balance on mort-

gage. Address Harmon Bathrick, owner, Elizaville, N. Y., or John P. Fulton, agent, Red Hook, N. Y.

No. 261.—Farm of 246 acres; located  $\frac{3}{4}$  of a mile from Elizaville P. O., 1 mile from Elizaville railway station, on line of C. N. E. Ry.,  $\frac{3}{4}$  mile from Methodist church. Highways, good gravel roads. Nearest large village, Red Hook, 7 miles distant, population, about 2,000, reached by rail and highway. Occupied by owner. Surface of farm, 100 acres creek meadows; balance rolling. Soil, gravel and black loam. Acres in meadow, 150; in natural pasture, 46; in timber, 50; pine, oak, chestnut, locust, hickory, ash and hemlock. Acres tillable, 200. Fruit, 500 apple and pear trees. Best adapted to corn, rye, oats, potatoes and hay. Fences, stone wall, rail and wire, good condition. House, 40x30, with addition, 45x20, fine condition. Outbuildings: large main barn, wagon house, hay barns, hog houses, etc. Watered, house and barn, by running water; fields, by spring and stream. This farm is one mile from Twin Lake. Reason for selling, ill health of owner. Price, \$12,000. Terms, \$7,000 cash, balance on mortgage. Address, Harry Couse, owner, Elizaville, N. Y., or John P. Fulton, agent, Red Hook, N. Y.

## TOWN OF GHENT

Population 2,819

No. 262.—Farm of 175 acres; located 2 miles from Mellenville P. O.;  $\frac{1}{4}$  mile from railway station at Pulver Station, on line of Hudson & Chatham branch of B. & A. R. R.;  $\frac{3}{4}$  mile from school; 3 miles from churches; 2 miles from Borden's milk station. Nearest large village, Philmont, population, 2,000. Highways, good. Surface, mostly level, some rolling. Soil, rich black and gravelly loam. All of the land tillable. Fruit enough for family use. Best adapted to rye, oats, hay, corn and potatoes. Fences, woven wire, board and wall. Extra fine house, 12 large rooms, 2 large halls, colonial style. Outbuildings: large side hill barn, cow stable, sheep stable, hog house, corn house, carriage and wood house, in fair condition. Watered by well and never failing spring. This property is about 8 miles from the Hudson river. Products can be shipped at Pulvers Station, practically on the farm. This is a high class farm. Reason for selling, owner has

other business. R. F. D. and telephone lines available. For price and terms, address Elbert Miller, owner, 314 W. 112th street, New York City.

No. 263.—Farm of 216 acres; located 2 miles from Ghent or Chatham, on line of N. Y. C., B. & A., H. & C. and Rutland R. Rs.; 1 mile from school; 2 miles from churches; 3 miles from Borden's milk station. Nearest large village, Chatham, population, 2,251; also 12 miles from city of Hudson, population, 11,417. Highways, good. Surface, some level, some rolling and some hilly. Soil, rich black and gravelly loam. Acres tillable, 200; balance, mostly wooded, some good oak and pine timber. Fruit, about 350 fruit trees of all kinds. Best adapted to rye, oats, corn, hay and potatoes. Fences, mostly woven wire, some board and stone wall, in good condition. House, 20 rooms, 3 halls, 2 cellars, separate apartments for owner and farmer, in excellent condition. Fine large shade trees. Outbuildings: main barn, side hill, 58x40; carriage house and horse stable, 72x24; cow stable, 60x22; sheep stable, 28x24; hen and tool house, 23x14; corn house and workshop, 24x22; garage, 20x17; hog house, 20x15; ice house, 15x15; smoke house, 11x9; wood house, 22x14; all in fine condition. Watered by running water in barns, 3 wells, 3 streams, and, 2 cisterns. Have dam built across one small stream forming a nice ice pond. R. F. D. and telephone lines available. This property is 4 miles from the Hudson river and 7½ miles from Kinderhook lake. Well adapted for stock farm. Reason for selling, owner engaged in other business. For price and terms, address Elbert Miller, owner, 314 W. 112th street, New York City.

No. 264.—Farm of 233 acres; located 5 miles from Chatham P. O., R. D. and 3 miles from railway station at Kinderhook, on line of Albany Southern trolley, 3 miles from milk station. Highways, good. General surface, rolling. Nature of soil, loam. Acres in timber, 30, oak, chestnut, soft and hardwood; there are 350,000 feet of sawing timber besides thousands of cords of hard wood; acres tillable, 160. Best adapted to general crops, especially rye and potatoes. Two houses, several barns, wagon house, new hog and poultry house, some of these buildings need repair. Lake of 10 or 12 acres adjoins farm. Possession at any

time. Reason for selling, to settle estate. Price, \$4,200. Terms, \$2,900 cash, balance on mortgage. Address, Mr. E. F. Fowler, Executor, Canaan, N. Y., or W. B. Vail, agent, 469 State street, Schenectady, N. Y.

No. 265.—Farm of 102 acres; located 5 miles from Ghent P. O., R. D. No. 1; 3 miles from railway station at Pulvers, on line of B. & A. R. R.; 1½ miles from school; 1½ miles from Reformed church; 7 miles from butter factory; 7 miles from milk station and condensing plant. Highways, hilly. Nearest city, Hudson, population, 11,417, 7 miles distant, reached by highway. General surface, rolling. Nature of soil, gravel and some loam. Acres that can be used as meadow, 15; in natural pasture, 25; in timber, 8, oak, pine and chestnut. Acres tillable, 94. Fruit, 500 apple trees, mostly Baldwins, in 1913 had 800 barrels of apples. Best adapted to rye, oats, corn and buckwheat. Fences, wire, in good condition. House, 2 stories, 9 rooms, in good condition. Outbuildings: barn, 42x42, good condition; hog pen, poultry house, corn house, all in good condition. House and barns watered by well, fields by small creek. Occupied by owner. Reason for selling, owner a widow. Address Julia O'Dea, owner. R. D. No. 1, Ghent, N. Y.

No. 266.—Farm of 90 acres; located 3 miles from Ghent P. O., R. D. No. 1, and railway station at Pulvers, on line of B. & A. R. R.; 1 mile from school; 2½ miles from churches; 5 miles from butter factory; 5 miles from cheese factory and milk station. Highways, hilly. Nearest city, Hudson, population 11,417. 7½ miles distant, reached by rail and highway. General surface, rolling. Nature of soil, limestone and loam. Very little timber. Acres tillable, all. Fruit, 100 apple and 20 pear trees of all kinds. Best adapted to rye, oats, corn and buckwheat. Fences, stone wall and rail. House, 40x40, good condition. Outbuildings: barn, 40x50, good frame, new roof this year; cow shed, 30x20; poultry house; hog pen, fairly good condition. House and barns watered by well fields by springs. Occupied by tenant. Reason for selling, old age. Price, \$4,000. Terms, one-half cash, balance on mortgage. Address Jeremiah Kittle, owner. R. F. D. No. 1, Ghent, N. Y. Owner will rent.

No. 267.—Farm of 80 acres; located 3 miles from Stuyvesant Falls P. O. and



**FIG. 268.—BUILDINGS ON FARM NO. 203, TOWN OF GHENT, COLUMBIA COUNTY.**



**FIG. 269.—HOUSE ON FARM NO. 262, TOWN OF GHENT, COLUMBIA COUNTY.**





railway station, on line of Albany Southern R. R.;  $1\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from Reformed church and 3 miles from milk station. Highways, good. Nearest city, Hudson, population 11,417, 10 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, sandy loam. Acres that can be used as meadow, 70; in timber, 7, oak, pine and chestnut. Acres tillable, 70. Fruit, 80 apple, 20 peach, 30 pear and 5 plum trees. Best adapted to grain and hay. Eleven room house, excellent condition; cellar under entire house, 30x40. Outbuildings: barn, 40x60; wagon house, 33x36; poultry house, 10x20, and wood house, 15x15. House watered by well, barns by spring and fields by springs. Occupied by owner. Price, \$6,000. Terms, cash. Address Arthur J. Raab, owner, R. D. No. 1, Ghent, N. Y.

No. 268.—Farm of 212 acres; located  $1\frac{1}{2}$  miles from Ghent P. O., R. D. 2; and railway station, on line of Harlem R. R. and Hudson branch of B. & A. R. R.;  $\frac{3}{4}$  mile from school;  $1\frac{1}{2}$  miles from Protestant churches; 3 miles from butter factory and milk station. Roads, good, a little hilly. Nearest village, Chatham, population 2,251, 4 miles distant, by rail and good highway. Surface, part hilly and part level. Soil, gravelly loam and slate; 65 acres of meadow; 50 acres of natural pasture; 15 acres of timber, mostly second growth, including 5 acres of pine. Acres tillable, 150. About 100 bearing apple trees and several plum, peach and pear trees. All kinds of crops seem to do fairly well. Fences, mostly wire, some stone wall. There are two complete sets of buildings, near enough for convenience. The two houses are  $1\frac{1}{2}$  stories, in fair condition. One 2 story barn and plenty of other barns and buildings for convenience and comfort, all in good condition, mostly newly roofed. House has water piped from spring; barns, piped from spring and running stream; fields have several springs. The Catskill Mountains are in full view from the piazza and any part of farm, about 10 miles distant; the Hudson river about same distance. This farm is one of the best watered in this section; water from never-failing spring is piped to the house, barn yard and poultry yard. Telephone in house, and R. D. passes door. The farm is practically divided by the Harlem R. R. One set of buildings each side. It is par-

ticularly adapted to stock, especially sheep. Occupied by owner since 1880. Reason for selling, owner's desire to retire. Price, \$9,000. Terms, one-half cash, balance mortgage, 5%, term of years. Address Delmer Kisselburgh, owner, Ghent, N. Y.

No. 269.—Farm of 200 acres; located 1 mile from Stockport P. O. and railway station, on line of Albany & Southern R. R.; 1 mile from school and Reformed church;  $3\frac{1}{2}$  miles from butter factory and milk station. Highways, somewhat hilly. Nearest city, Hudson, 7 miles distant, population, 11,417, reached by rail and highway. Surface of farm, rolling. Soil, clay loam. Acres in meadow, 100; in natural pasture, 6; in timber, 12, pine and oak. Fruit, 75 apple trees. Best adapted to hay, corn and oats. Fences, mostly woven wire, fair condition. House, 25x40, stone, good condition. Outbuildings: new barn, 40x52; new hog pen and cow shed; also wood house, wagon house and corn house, in good condition. Watered by spring and cistern. Occupied by tenant. Reason for selling, old age. Price, \$8,000. Terms, easy. Address Solomon Sharp, owner, Stuyvesant Falls, N. Y. Owner will rent.

No. 270.—Farm of 270 acres; located 2 miles from Philmont P. O., R. D. 2, and railway station, on line of Harlem R. R.; 1 mile from school; 2 miles from churches. Highways, good. Surface of farm, some level and some rolling. Soil, slate rock, loam and limestone. Acres in natural pasture, 20; in timber, 100. Acres tillable, 150. Fruit, pears, plums, cherries and apples. Adapted to general farming. Fences, stone, rail and wire. House, 40x42, with 8 rooms, good condition. Outbuildings: barn, 32x53; wagon house, 24x22; basement barn and wagon house, nearly new; milk, hen and hog houses. Watered by running water. Occupied by owner. Reason for selling, advanced age of owner. Price, \$5,500. Terms, \$2,900 cash. Address Robert Hoag, owner, R. D. 2, Philmont, N. Y., or Walter B. Vail, agent, 469 State St., Schenectady, N. Y.

#### TOWN OF HILLSDALE

Population 1,504

No. 271.—Farm of 140 acres; 5 miles from Hillsdale P. O. and railway station, on Harlem Division of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from cheese factory

and milk station; R. D. and telephone connections. Highways, good and level. Nearest city, Hudson, population 11,417, distant 16 miles, reached by rail and highway. Occupied by owner. Surface of farm, rolling. Soil, slate loam. Acres in meadow, 30 to 40; timber, 35, oak and chestnut. Acres tillable, 100. Fruit, apples, plums, grapes, pears and peaches, fine variety. Adapted to hay, potatoes and all kinds of grain. Fences, rail and wall. House, 48x30, in good condition. Outbuildings, all in good condition; 1,000 feet above sea level; the best of air and finest spring water. An ideal summer residence. Price, \$3,000. Terms, easy. Address Judson Wiley, owner, Hillsdale, N. Y.

No. 272.—Farm of 42 acres; located 2½ miles from Hillsdale P. O.; 2½ miles from railway station, on line of N. Y. C. R. R. at Hillsdale; 5 miles from cheese factory; 2½ miles from condensing plant. Highways, good. Soil, limestone. Good orchard. Best adapted to corn, oats, rye and potatoes. Good-sized house, good-sized barn. Reason for selling, advanced age of owner. Price, \$1,500. Terms, ½ down. Address James Ward, owner, Hillsdale, N. Y.

No. 273.—Farm of 140 acres; located 4 miles from Hillsdale P. O., R. D. 1, and railway station, on line of Harlem R. R.; 1/16 mile from school and Methodist church; ½ mile from butter factory; 4 miles from milk station. State road. Nearest village, Chatham, population 2,251, 10 miles distant, reached by rail or highway. Surface of farm, rolling. Soil, lime. Acres in meadow, 60; in natural pasture, 70; in timber, 10, white pine and hemlock. Acres tillable, 125. Fruit, apples. Best adapted to grass, corn, oats and rye. Fences, wire, with some stone wall. House, 2 stories, 35x22, with wing, in fine condition. Barn, 62x30; wagon house, 40x28; hay barn, 25x20; grain building, 20x18; hog house, 25x18; ice house. Watered, house by well and cistern, barns by well with wind mill, fields by creek. Five miles from Prospect Lake, Mass. Pleasant place for a residence. Reason for selling, to close estate. Price, \$8,000. Address Austin Morey estate, Hillsdale, Columbia, County, N. Y. Owners will rent with option to buy.

No. 274.—Farm of 173 acres; located 1½ miles from Hillsdale P. O.; 1½ miles from railway station, on line of

N. Y. C. R. R.; 1½ miles from school; 1½ miles from churches; 1½ miles from butter factory and milk station. Highways, good. Nearest large village, Great Barrington, Mass., population 5,000. Surface, rolling. Soil, loam and limestone. Acres tillable, 158; 20 acres of chestnut, pine and oak timber. Fruit, 100 apple trees, pears and plums. Best adapted to rye, corn, oats, potatoes, and hay. Fences, wall, rail and some wire, in good condition. House, 40x45, in excellent condition. Outbuildings: 2 barns, one 86x40 and other 24x40; large wagon house and sheds; tenant house 24x40. Watered by well, springs and streams. Occupied by tenant. Reason for selling, owner has other business. Price, \$10,000. Terms, easy. Address W. A. Mallery, Jr., owner, Hillsdale, N. Y.

No. 275.—Farm of 4 acres; located 1 mile from Hillsdale P. O.; 1 mile from railway station; 1 mile from churches; 1 mile from butter factory and milk station. Highways, good; on State road leading from Great Barrington, Mass., to Hudson, N. Y. Nearest large village, Great Barrington, Mass., population 5,000. Surface, level. Good limestone soil. Acres in meadow, all. Acres tillable, all. Fruit, about 20 apple trees. Best adapted to hay and garden truck. Fences, good. House, 40x24, 2½ stories, in excellent condition. Outbuildings, good. Watered by wells, spring and streams. This property is 6 miles from Copake Lake and 4 miles from Prospect Lake. Occupied by tenant. Reason for selling, owner has other business. Price, \$2,500. Terms, easy. Address W. A. Mallery, owner, Hillsdale, N. Y.

No. 276.—Farm of 10 acres; located 1½ miles from Hillsdale P. O. and railway station; ½ mile from school; 1 mile from churches; 1½ miles from butter and cheese factory. Nearest large village, Great Barrington, Mass., population, 5,000. Highways, good. On State road leading from Great Barrington, Mass., to Hudson, N. Y. Surface, rolling. Soil, loam. Acres in meadow, all. Acres tillable, all. Fruit, 60 pear trees, apples and cherries. Adapted to all general crops. Fences, wall and rail. House, 18x24, 1½ stories in good condition. Outbuildings, in good condition; barn, 20x30; shed, 24x14. Watered by well, spring and stream. This property is 3 miles from Prospect Lake. Occupied by tenant. Reason for selling, owner has other business. Price, \$2,000. Terms, ½



**FIG. 270.— HOUSE ON FARM NO. 278, TOWN OF KINDERHOOK, COLUMBIA COUNTY.**



**FIG. 271.— BARN ON FARM 296, TOWN OF HOMER. CORTLAND COUNTY.**





down, balance on mortgage.—Address W. A. Mallery, owner, Hillsdale, N. Y.

No. 277.—Farm of  $4\frac{1}{2}$  acres; located 1 mile from Hillsdale P. O., and railway station, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{3}{4}$  mile from churches. Highways, good. Nearest large village, Hillsdale, population 400. Surface, level. Acres tillable, 2. Fruit, 50 apple trees, pears and plums. House of 12 rooms; in excellent condition. Watered by well and stream. This property is located 1 mile from Berkshire Hills and 4 miles from Prospect Lake. Occupied by tenant. It is located on main State road from Hudson to Great Barrington, Mass., near a nice stream of water. Standing high and dry, its location cannot be excelled. Price, \$2,500. Terms, cash. Owner will rent. Address William A. Mallery, owner, Hillsdale, N. Y.

#### TOWN OF KINDERHOOK.

Population 2,947

No. 278. Farm of 125 acres; located  $1\frac{1}{2}$  miles from Kinderhook P. O. and railway station, on line of A. & S. R. R.;  $1\frac{1}{2}$  miles from school and churches; 3 miles from butter factory;  $1\frac{1}{2}$  miles from milk station. Highways good. Nearest city, Hudson, population 11,417, 14 miles distant, reached by rail or highway. Surface, mostly level, some rolling. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 5, hardwood, oak, ash, locust for posts. Acres tillable, 100. Fruit, 400 apple trees in full bearing, cherries, pears and grapes; young orchard of 500 trees, beginning to bear. Best adapted to potatoes, corn, oats and rye. Fences, mostly wire, in good condition. House, 30x40, with wing, 15x15, in good condition; water, bath and telephone; tenant house, 24x30; 2 barns, 30x40; stable and wagon house, 40x20; shed and cow stable, 30x50; corn house, new 75-ton silo, and wagon house, 20x24. Watered, house by well and cistern; barns, by wells; fields, by springs and running stream. Three miles from Kinderhook Lake. Ten miles from Hudson River; 14 miles from Catskill Mountains. Occupied by owner. Reason for selling, owner wishes to locate in the city. Price and terms on application. Address A. M. Snyder, owner, Valatie, N. Y., R. D.

No. 279.—Farm of 108 acres; located

1 mile from Niverville P. O. and railway station on line of Boston & Albany railway;  $\frac{3}{4}$  mile from station on Albany & Southern electric road; 1 mile from school; 2 miles from churches; 4 miles from butter factory;  $1\frac{1}{4}$  miles from milk station. Milk collected at the door. General surface, level. Altitude, 315 feet. Nature of soil, gravelly loam. Acres in natural pasture, 12; in timber, 9, pine, oak, hemlock, maple, ash and beech. Acres tillable, 85. Fruit, 150 apple trees, 12 or 15 pears, cherries, peaches and plums. Best adapted to corn, potatoes, rye, hay and other crops. Fences, wire, in good condition. House, 17 rooms, in excellent condition. Outbuildings: barn, 35x48; shed; stable and loft, 43x23; wagon house, 40x22; 2-story shop, 15x10; cow stable, 20x20, stanchions for 14 cows; corn house, 20x16; wood house, 20x18; poultry house, 18x16; house has running spring water; fields, spring and brook; barn, running spring water. Kinderhook Lake, 1 mile; Knickerbocker Lake, 2 miles. Occupied by owner. Reason for selling, old age and has two farms. Price on application. Terms, reasonable cash payment, balance mortgage. Address Jasper A. Smith, owner, Niverville, N. Y.

No. 280.—Farm of 109 acres; located 1 mile from Niverville P. O., R. D. 1 and railway station, on line of Boston & Albany R. R.; 1 mile from school and churches; 4 miles from butter factory;  $1\frac{1}{2}$  miles from milk station, milk collected at door. Highways, state road. General surface of farm, level. Altitude, 300 feet. Nature of soil, gravelly loam. Acres in pasture, 15; 30 acres in rye; in timber, 12, pine, hemlock, maple and oak. Acres tillable, 85. Fruit, for family use. Best adapted to general farm crops. Fences, wire, good. House, 10 rooms. Outbuildings: barn 33x45; wagon house, 20x18; hog house; poultry house, 18x15; wood house, 24x15. House and barns watered by wells; fields by spring and brook; 1 mile from Kinderhook Lake. Occupied by owner. Possession at any time. Reason for selling, old age. Price on application. Terms, reasonable. Address Mrs. Jasper A. Smith, owner, Niverville, N. Y. Will rent with option to buy.

No. 281.—Farm of 200 acres; situated within the incorporated village of Kinderhook, population 698. Fertile, pro-

ductive soil. Albany & Southern Railway Station about  $\frac{3}{4}$  mile from farm, hourly train service. Churches, high school, grange and stores within easy walking distance. State road. Village has 5 miles of concrete sidewalks and streets are lighted by electricity. Farm contains about  $\frac{1}{2}$  bottom land or creek flats, which produce large crops of corn, hay, grain, etc. Wood enough for home use. Good pasture. Kinderhook Creek flows through the farm. Abundance of springs, giving unlimited water supply. Trout pond and springs from which water is supplied by hydraulic ram to house and barns. 350 young apple trees just in bearing; 750 young trees planted recently; 500 pear trees in bearing; other fruit for home use. House, 13 rooms, 200 years old; bath and heat, excellent repair. Nine-room cottage for farm help. Ample barns, including 3 silos; stable room for 200 head of cattle, storage room for hay, grain and farm tools. For price and further particulars, address Wm. B. Van Alstyne, owner, Kinderhook, N. Y.

No. 282.—Farm of 190 acres; located  $2\frac{1}{2}$  miles from Valatie P. O., R. D. 1, and railway station, on line of A. & S. Ry.;  $2\frac{1}{2}$  miles from high school, Catholic and Protestant churches. Highways in good condition. Nearest city, Albany, 16 miles distant, population 100,253, reached by rail and highway. Occupied by owner. Surface of farm, nearly level. Soil, clay loam and sand. Acres in meadow, 63; in timber, 12, white and yellow pine, white and black oak and maple. All tillable except timber land. Fruit, 500 apple trees, also a few peaches, pears, cherries and grapes. Best adapted to grain, corn and hay. Fences, American wire, Knox wire, good condition. House, 2 stories, 18 rooms, piazza, good condition. Outbuildings, barn 50x60, hip roof, good. Watered by well, cistern and brook. This farm is  $2\frac{1}{2}$  miles from Kinderhook Lake. Price, \$10,000. Terms, one-half down, remainder on mortgage. Reason for selling, ill health of owner. Address Katharine M. Pruyn, owner, Valatie, N. Y., R. D. 1. Owner will rent.

#### TOWN OF LIVINGSTON

Population 1,620

No. 283.—Farm of 275 acres; 8 miles from Hudson;  $\frac{1}{4}$  mile from school;  $2\frac{1}{2}$

miles from churches;  $3\frac{1}{2}$  miles from creamery. Highways, good. Nearest city, Hudson, population 11,417, 8 miles distant. Surface, level. Nature and quality of soil, loam. Acres in meadow, 200; natural pasture, 75. All tillable. Fruit, about 500 apple trees. Best adapted to hay, grain, potatoes and dairying. Thirty cows on farm at present. Fences, wire and good. House, two stories, basement, 10 rooms. Outbuildings: 3 barns, 62x52, 45x38, 46x32, good condition. Watered, house by well; barns and fields, by well and springs. Reason for selling, advanced age of owner. Price, about \$11,000. Address W. S. Wattles, owner, Box 124, Hudson, N. Y.

No. 284.—Farm of 100 acres; located 2 miles from Elizaville P. O., R. D., and railway station, on line of C. N. E. R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{2}$  miles from Methodist church; 2 miles from butter factory and milk station. Highways, good. Nearest city, Hudson, population 11,417, distance 13 miles, reached by highway. General surface, level. Altitude, 500 feet. Nature of soil, gravelly. Acres in meadow, 80; in natural pasture, 10; in timber, 10, oak, basswood and chestnut. Acres tillable, 90. Fruit, 300 apple trees, 20 peach and 100 pear. Best adapted to hay and grain. Fences, wire. House, 40x40, recently painted, good condition. Outbuildings, main barn, 60x30; wagon house, adjoining, 30x40, all new. House watered by running water, barns by stream and fields by stream. Occupied by owner. Reason for selling, to settle an estate. Price, \$7,500. Terms: one-half cash, balance on mortgage. Address John H. Decker, owner, Elizaville, N. Y., or John P. Fulton, broker, Red Hook, N. Y.

#### TOWN OF NEW LEBANON

Population 1,378

No. 285.—Farm of 38 acres; located 1 mile from New Lebanon P. O.;  $\frac{1}{4}$  mile from railway station, on line of Rutland R. R.;  $\frac{1}{2}$  mile from school; Catholic and Congregational churches nearby;  $\frac{1}{4}$  mile from milk station. Highway, in fine condition. Nearest city, Pittsfield, population 40,000, distance, 8 miles, reached by highway. General surface of farm, level. Nature of soil, good loam. Acres in pasture, 10; in timber, 5. Tillable, 25. Orchard consists of about 35 apple trees in



FIG. 272.—HOUSE ON FARM 287, TOWN OF CININNATUS, CORTLANDT COUNTY.



bearing condition. Best adapted to general crops. House, 10 rooms,  $1\frac{1}{2}$  stories, in good condition. Outbuildings: good sized barn, wagon house, and other buildings, in good condition. Watered, house by running water. Reason for selling, to settle estate. Price, \$3,000. Address Mrs. John W. O'Neil, owner, New Lebanon, N. Y., or Walter B. Vail, agent, 469 State St., Schenectady, N. Y.

No. 286.—Farm of 60 acres; located 1 mile from village of West Lebanon, post-office, hotel, church and school;  $\frac{1}{2}$  mile from State road running from Albany; 12 miles from Chatham, population 2,251, on line of Rutland R. R.;  $\frac{1}{2}$

mile from railway station and on R. D. and telephone line. 30 acres in meadow; in pasture, 15; in timber, 15, pine, chestnut and hemlock. Farm keeps 6 cows and team. Fruit, 50 bearing apple trees, also pears, plums and grapes. House,  $2\frac{1}{2}$  stories, 15 rooms. Outbuildings, wood house, wagon house, corn house, hog and chicken house with barn,  $20 \times 40$ , and shed attached, all in good condition. Watered by well and springs. Price, \$2,200. Terms,  $\frac{1}{2}$  down, balance on bond and mortgage. Address H. J. Gibson, owner, West Lebanon, N. Y. Owner will rent with option to buy.

### CORTLAND COUNTY

Area, 485 square miles. Population, 29,249. Annual precipitation, 48.41 inches. Annual mean temperature,  $47.7^{\circ}$ . Number of farms, 2,610. Average price of land, including buildings is \$31.73 per acre. County seat, Cortland.

This county lies in the central part of the State.

Its surface is hilly, rolling, and in places broken, consisting mostly of arable ridges with rich valleys between. The highlands are divided into general ridges extending north and south through the county. The northern part of the county spreads out into a high plateau broken by hills. The drainage is nearly all through the Tioughnioga river, which flows southward centrally through the county. The county is well watered, naturally drained. The soil upon the hills is principally a sand and gravelly loam; that in the valleys the same general character with a large mixture of disintegrated slate, shale and limestone. This is a distinctively agricultural county, although carriage, wirecloth and wagon manufacturing is quite extensive. Like most of the counties of New York State the ample railroad and transportation facilities bring it within easy reach of great markets. There is considerable timber scattered throughout the county, but not in large tracts. There are many maple groves from which sugar is made, the amount being given as 25,381 gallons of syrup and 118,550 pounds of sugar. There are 2,444 farms reporting domestic animals as follows: Dairy cows, 27,427; horses, 7,033; swine, 5,233; sheep, 3,616; poultry, 153,550; production of milk was 15,743,198 gallons, with total receipts of sale of dairy products of \$1,578,776. The leading crops are corn, 74,105 bushels; oats, 396,974 bushels; barley, 24,348 bushels; buckwheat, 110,793 bushels; potatoes, 750,187 bushels; hay and forage, 130,414 tons. Churches and schools abound throughout the county. A State Normal School is located at Cortland. This school with the 145 district schools, graded and high schools in villages give the amplest educational facilities. Twenty-five agricultural organizations are devoted to the interest of the farmer and sixty well-located dairy stations and factories are found. Apples and other orchard fruits are successfully raised throughout the county. There is an increase of 19.6 per cent. over the value of farm property in the last decade. This increase is largely represented by live stock, machinery and implements. The price of land has declined eighty-three cents per acre in ten years, but the farm buildings are worth, \$1,360,000 more than in 1900. The next few years will undoubtedly change these statistics, because of the greater demand for New York farm lands which is increasing every year.

#### TOWN OF CININNATUS

Population 965

No. 287.—Farm of 286 acres; located 3 miles from Cincinnatus P. O.;  $1\frac{1}{4}$  miles from railway station at Gee Brook on line of Lackawanna R. R.; 2 miles

from school; 3 miles from churches of all denominations;  $1\frac{1}{4}$  miles from milk station. Highways, level, good condition. Nearest large village, Cincinnatus, population 965, 3 miles distant, reached by highway. Surface, nearly level, slight slope. Altitude,

1,040. Soil, part light clay loam, balance gravelly loam. Acres in meadow, 90; in natural pasture, 100; in timber, 50, mostly second growth. All tillable. About 60 standard apple trees, also pears, grapes, etc. Best adapted to the raising of corn, potatoes, oats and other grains. Fences, good, mostly wire. House, 12 rooms, with porch on two sides, in fine condition. Outbuildings, basement barn, 44x100, built 9 years ago; stanchions for 60 head of cattle and box stalls; horse stable; hog house for 40 hogs; henery; barn winters vegetables without freezing. Every convenience. Watered, house, by piped spring; barn by spring; fields by river and springs. Occupied by tenant. Reason for selling, owner is a widow. Price, \$35 per acre. Terms reasonable. Address Mrs. Josephine Harrington, Owner, Cincinnati, N. Y., or Crandall's Realty Agency, Homer, N. Y.

No. 288.—Farm of 300 acres, located 2 miles from East Freetown P. O.; 3 miles from Cincinnati, on line of Lackawanna R. R.; station on farm,  $\frac{1}{2}$  mile from house;  $\frac{3}{4}$  mile from school; 2 miles from milk station; 3 miles from churches; 3 miles from butter factory; 3 miles from cheese factory and condensing plant. Highways, good. Nearest city, Cortland, population, 11,504, 14 miles distant, reached by rail or highway. Surface of farm gently sloping. Altitude, 1,600 feet. Soil, gravelly loam. Acres in meadow, 100; in pasture, 180; in timber, 20, mostly beech. Fences, wire, good condition. Eleven-room house, fair condition. Outbuildings, new barn, 50x100, concrete floor in basement, will hold 80 cows, stanchions now for 40, milk house with running spring water, enclosed shed, 17x160; drinking trough with running water, in barnyard, pastures watered by brook, never run dry. Occupied by tenant. Price, \$5,500. Terms, part cash, balance can remain indefinitely. Address Walter S. Bull, Owner, Cortland, N. Y.

#### TOWN OF CORTLANDVILLE

Population 3,135

No. 289.—Farm of 218 acres, located 2 miles from Cortland city line, P. O., R. D. No. 1;  $2\frac{1}{2}$  miles from railway station, on line of D. L. & W. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from several milk stations and 2 miles from condensing plant. Highways, good but hilly. Gen-

eral surface, level. Altitude, 1,450 feet. Nature of soil, loam. Acres that can be used as meadow, 193; in timber, 25; hard maple and ash. Acres tillable, all. Fruit, 100 apple trees of selected variety, also young orchard, just set. Best adapted to grain, dairying and potatoes. Fences, barbed and woven wire, good. House, large, newly painted, in good condition. Outbuildings, basement barn with wood and concrete floor, 36x100; 2 other barns 30x40, silo 16x30, buildings all newly painted. House watered by piped spring, barns same, fields by spring water. Occupied by owner. Reason for selling, wishes to retire. Price, \$10,000. Terms, one-half cash, balance on mortgage. Forty head of cattle and tools at a bargain. Address A. W. Sharp, Owner, R. D., Cortland, N. Y., or Crandall's Real Estate Agency, Brokers, Homer, N. Y.

#### TOWN OF CUYLER

Population 881

No. 290.—Farm of 600 acres, located 20 miles from Syracuse and 2 miles from Cuyler P. O., R. D. 2; 2 miles from railway station on Lehigh Valley;  $\frac{1}{4}$  mile from school;  $\frac{1}{2}$  mile from churches; 2 miles from butter factory; 2 miles from cheese factory and milk station. Highway, state road. General surface, rolling and partly level. Nature of soil, clay and lime loam. Altitude, 1,000 feet. Acres in meadow, 200; in natural pasture, 100; in timber, 100, hardwood and some soft beech and maple; acres tillable, about 475. Fruit, all kinds, of which 100 are apples. Best adapted to fruit, general crops, alfalfa and potatoes. Fences, wire and rail, good. Three houses, 10, 8, and 7 roomed, 2 telephones. Milk house and coolers of good size, all in good condition. Outbuildings: 2 basement barns, concrete floors, 40x100 and 40x150, stanchioned for 100 cows, and running water to both as also to the house; 2 hog houses and poultry houses, good size with concrete floors. Several other buildings. 2 large silos. All buildings painted in 1913. House watered by running water; barns, by running water; fields, by streams and springs. Cazenovia Lake Creek through farm. Occupied by tenants this season. Reason for selling, owner is aged and in poor health. Terms, reasonable amount of cash down, balance 5% mortgage to run to suit the purchaser. The 100 acres of timber are a fine maple sugar orchard and fully equipped for the busi-



**FIG. 273.—BARN ON FARM 287. TOWN OF CINCINNATUS, CORTLAND COUNTY.**



**FIG. 274.—BARN ON FARM NO. 288, TOWN OF CINCINNATUS, CORTLAND COUNTY.**



ness of making maple sugar and syrup, for which it is famous. Address George Graham, Owner, Cuyler, N. Y., or Chas. S. Hutchinson, Agent, 107 West Kennedy street, Syracuse, N. Y.

No. 291.—Farm of 65 acres; located  $1\frac{1}{2}$  miles from Cuyler P. O., and railway station on line of Lehigh Valley R. R.;  $1\frac{1}{4}$  miles from school, church and milk station. Highways, state road. Nearest village, De Ruyter, population 538, 3 miles distant, reached by rail or highway. General surface, nearly level. Nature of soil, clay loam and black soil, said to be muck. In natural pasture, 20; in timber, 5, mostly hard maple. Acres tillable, 60. Fruit, 40 apple, 4 plum and 2 cherry trees, 3 grapevines, currants, gooseberries and strawberries. Best adapted to hay, oats, potatoes, corn, vegetables, etc. Fences, good. House, 8 rooms, good condition. Outbuildings, barn 28x50, with 17 stanchions, barns 22x58, with concrete floor all through. House and barns watered by well, fields by river. This farm is on Tioughnioga river. Occupied by owner. Reason for selling, wishes to retire. Price, \$4,800, includes 9 cows, 9 heifers, thoroughbred bull, all are high grade Holsteins; 2 work horses, and all farming implements. Terms, \$2,500 cash, balance on mortgage. Address J. L. Netzel, owner, Cuyler, N. Y., or J. H. Fort, broker, Stone Building, Oneida, N. Y.

#### TOWN OF FREETOWN

Population 551

No. 292. Farm of 165 acres; located 2 miles from East Freetown P. O., R. D. No. 1, and railway station, on line of D. L. & W. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches, butter factory, cheese factory and milk station. Highways, good. Nearest city, Cortland, 13 miles distant, population 11,504, reached by rail and highway. Surface of farm, generally rolling. Altitude, about 1,200 feet. Soil, loam. Acres in meadow, 40; in natural pasture, 85; in timber, 35, ash, maple, beech and basswood. Acres tillable 80. Fruit, 25 apple trees. Best adapted to grass and all grains except wheat. Fences, wire, board and rail, good condition. House, 10 rooms. Outbuildings, cow barn, 36x56 with basement; horse barn, 26x36; granary, 16x16. Watered, house by well, barns and fields by creek. Occupied by tenant. Reason for selling, poor health

of owner. Price, \$4,000. Terms, \$1,500 cash, balance 12 or 15 years. Address Geo. Carter, owner, Marathon, N. Y.

No. 293.—Farm of 215 acres; located 1 mile from Freetown P. O., R. D.; 6 miles from railway station at Marathon, on line of D. L. & W. R. R.; school on farm; 1 mile from churches and 1 mile from condensing plant. Highways, dirt road, good condition. Nearest city, Cortland, population, 11,504, distance 8 miles, reached by highway. General surface, rolling. Nature of soil, loam. Acres in meadow, 100; in natural pasture, 75; in timber, 40, hard maple, ash and beech. Acres tillable, 175. Fruit, apples. Best adapted to corn, oats, barley, buckwheat and potatoes. Fences, wire, good condition. House, fair condition. Barn, fair condition. House, barn and fields watered by springs. Occupied by owner. Reason for selling, desires a smaller place. Price, \$7,525. Terms, cash. Fine sugar bush. Building for making cheese and butter. Address Henry Petersen, owner, Freetown, N. Y., or J. L. Brink, broker, Marathon, N. Y.

#### TOWN OF HARFORD

Population 623

No. 294.—Farm of 125 acres; located 3 miles from P. O. and railway station at Harford Mills on line of Lehigh Valley R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from Methodist church; 3 miles from butter factory, cheese factory and milk station. Highways, hilly, in good condition. Nearest city, Cortland, population 11,504, 14 miles distant, reached by rail. Surface of farm, rolling. Nature of soil, slate gravel. Acres in meadow, 25; in natural pasture, 55; in timber, 45, mostly hard wood; acres tillable, 80. Fruit of all kinds. Best adapted to potatoes and other general crops. Fences, mostly wire, good condition. House, large frame, in good condition. Outbuildings, barn, 38x48, concrete floor; hen house; hog house, and tank house. Watered, house, by driven well; barn, by well; fields, by springs. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$2,700. Terms on request. Address Gilbert Ruscher, owner, Richford, N. Y.

#### TOWN OF HOMER

Population 3,891

No. 295.—Farm of 150 acres; located  $3\frac{1}{2}$  miles from Homer P. O., R. D.

7, and railway station, on line of D., L. & W. Ry.;  $\frac{3}{4}$  mile from school;  $3\frac{1}{2}$  miles from Catholic and Protestant churches and milk station;  $6\frac{1}{2}$  miles from milk condensing plant. Highways, somewhat hilly but good. Nearest large village, Homer, population 2,695,  $3\frac{1}{2}$  miles distant; nearest city, Cortland, population 11,504,  $6\frac{1}{2}$  miles distant, reached by highway. Surface of farm, nearly level. Altitude, about 1,100 feet. Soil, gravel loam. Acres in meadow, 85; in natural pasture, 55; in timber, 10, second growth beech and maple; acres tillable, 135. Fruit, fine apple orchard, also plums and cherries. Best adapted to hay, grain, potatoes, cabbage and corn. Fences, mostly wire, good condition. House, 10 rooms, good. Outbuildings, barn 26x124, silo, 22 stanchions; 3 box stalls, also room for 4 horses. Watered by well, spring and brook. Occupied by owner. Reason for selling, owner desires to retire from business. Price, \$5,000. Terms, \$2,250 cash, balance on mortgage at 5 per cent. Address P. O'Connor, owner, Cortland, N. Y., or W. G. Crandall, agent, Homer, N. Y.

No. 296.—Farm of 307 acres; located 4 miles from Homer P. O., R. D. 3; 2 miles from railway station at Little York on line of Lackawanna R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches of all denominations; 2 miles from milk station; 7 miles from condensing plant. Highways, level, in good condition. Nearest village, Homer, population about 2,695. Nearest city, Cortland population 11,504, 7 miles distant, reached by rail or highway. Surface, easy slope, slightly rolling. Altitude, 1,150 feet. Soil, clay and gravelly loam, mellow. Acres in meadow, about 75; in timber, 47, maple, hemlock, cherry and ash; some pasture land; acres tillable, 150; two large apple orchards; also plums, pears and cherries. Best adapted to potatoes, corn, cabbage and grains. Line fences good, balance fair, mostly wire. Two houses, one 16 rooms, fine condition; other, poor condition. Outbuildings, basement barn, 40x80, with silo, concrete floor, piped spring water to individual basins in front of stock; also medium sized barn in good condition. Watered, house, by running water; barn, by running water; fields, by springs and brook. This farm is 2 miles from Little York Lake, a popular summer resort. Occupied by tenant. Reason for selling, owner wishes to retire. Price, \$33 per

acre. Terms,  $\frac{1}{2}$  down; balance on easy terms. Address Stevens & Ellis, owners, Homer, N. Y., or Crandall's Realty Agency, Homer, N. Y.

No. 297.—Farm of 263 acres; located  $3\frac{3}{4}$  miles from Homer P. O., R. D. and railway station on line of D., L. & W. R. R.; school near farm;  $3\frac{3}{4}$  miles to churches;  $3\frac{1}{2}$  miles from butter and cheese factory;  $3\frac{3}{4}$  miles from milk station. Population of Homer, 3,891, reached by state highway. General surface, level. Altitude, 1,300 feet. Nature of soil, light clay and gravel loam. Acres in meadow, 175; in pasture, 75; in timber, 40, beech and sugar maples. Fruit, for home use. Best adapted to cabbage, grains and potatoes. Fences, some wire, good, others fair. House, 2 stories, 12 rooms. Outbuildings: barn, 30x80, fine condition; barns, 26x30; 30x40; 24x28; 20x28. House watered by springs, piped; barns, same; fields, by creek. Occupied by tenant. Reason for selling, owner non-resident. Price, \$7,500. Terms, \$3,000 cash, balance on mortgage at 5%. Address Weatherlow Bros., owners, Clyde, N. Y., or Crandall's Real Estate Agency, brokers, Homer, N. Y.

No. 298.—Farm of 43 acres; located  $2\frac{1}{2}$  miles from Homer, P. O., R. D. No. 2 and railway station on line of D., L. & W. R. R.;  $\frac{3}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from milk station. Population of Homer, 2,695, reached by State highway. Altitude, 1,250 feet. Nature of soil, loam. Acres in pasture, 15; acres tillable, 30. Fruit, 30 assorted apples, also other fruit. Best adapted to potatoes, cabbage, hay and grain. Fences, wire, fair. House, 8 rooms, good condition. Basement barn, 26x38, painted. House and barn watered by running water, fields by creek. Occupied by owner. Reason for selling, advanced age. Price, \$2,100. Terms, \$1,100 cash, balance easy. \$75 per year, at 5 %. Address A. E. Edwards, owner, R. D. Homer, N. Y., or Crandall's Real Estate Agency, brokers, Homer, N. Y.

#### TOWN OF LAPEER

Population 475

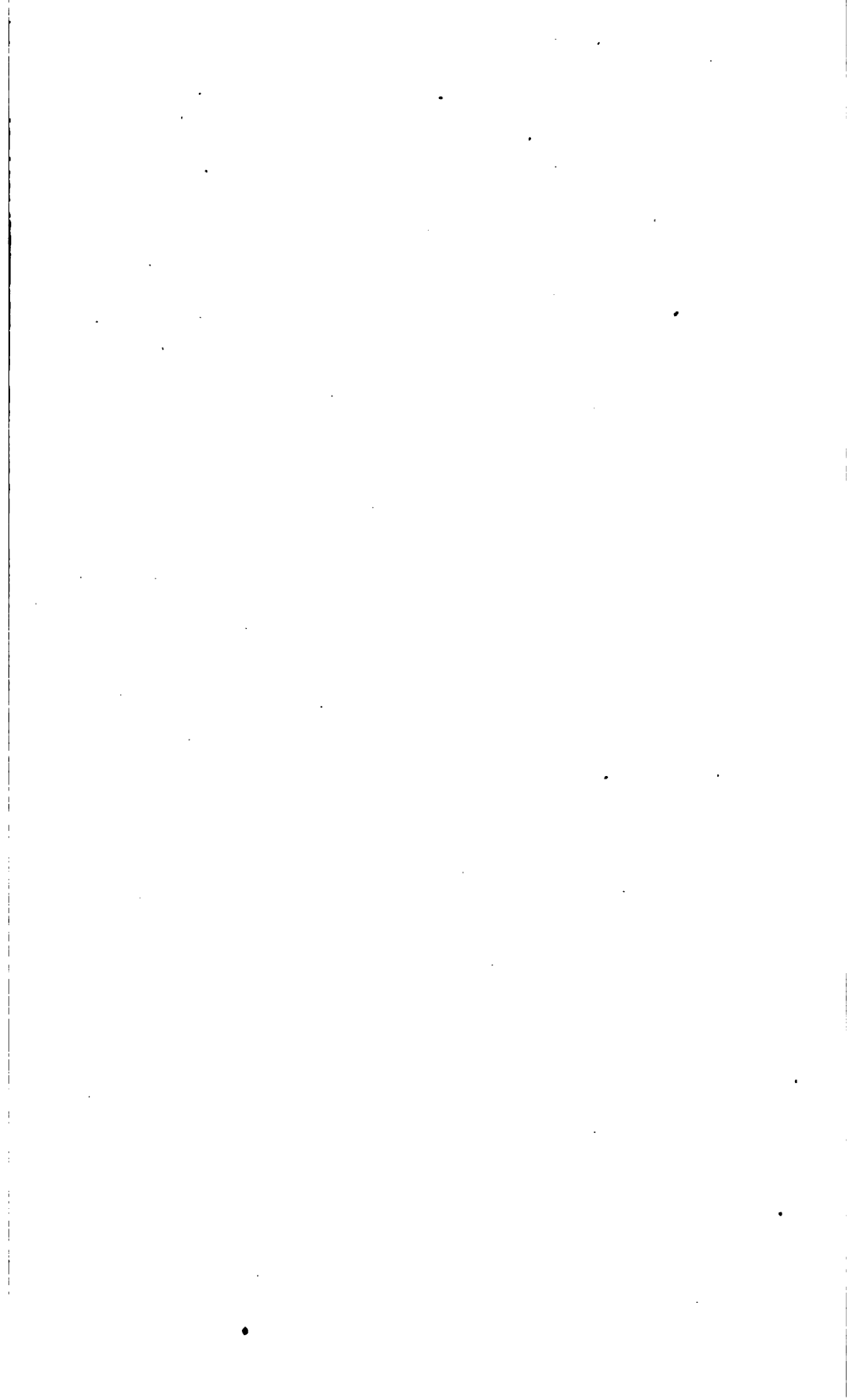
No. 299.—Farm of 240 acres; located 2 miles from Marathon P. O., R. D. No. 2, and railway station, on line of D., L. & W. R. R.;  $\frac{3}{4}$  mile from school; 2 miles from churches;  $1\frac{1}{4}$  miles from butter factory;  $1\frac{1}{4}$  miles from cheese factory; 2 miles from milk station and condensing



**FIG. 275.—VIEW ON FARM NO. 289, TOWN OF CORTLANDVILLE, CORTLAND COUNTY.**



**FIG. 276.—HOUSE ON FARM 290, TOWN OF CUYLER, CORTLAND COUNTY.**



plant. Highways, good. Nearest city, Cortland, population 11,504, 14 miles distant, reached by rail or highway. General surface, level and a little rolling. Altitude, 1,351 feet. Nature of soil, good. Acres that can be used as meadow, 180; in natural pasture, 140; in timber, 60, maple, beech, ash, hickory, basswood, cherry, hemlock and pine. Acres tillable, 180. Fruit, plums, pears, apples, cherries, etc. Best adapted to all kinds of crops. Fences, board, rail and wire, in good condition. House, large, in good condition. Outbuildings: barn, 36x80, nearly new; granary, 22x28; horse barn, 30x52; barn, 24x28 and 30x48. House watered by well, barns by spring and well, fields by creek and springs. Tioughnioga river, 2 miles distant. Occupied by owners. Reason for selling, ill health. Price, \$10,000. Terms, \$6,000 cash, balance on long time mortgage. Address O. A. & J. H. House, owners, R. D. No. 2, Marathon, N. Y.

No. 300.—Farm of 125 acres; located 2 miles from Marathon P. O., R. D. and railway station, on line of D., L. & W. R. R.; 1 mile from school; 2 miles from churches; 2 miles from milk station. Nearest village, Marathon, population 11,504, reached by level dirt highway. General surface, rolling. Nature of soil, loam. Acres in meadow, 50; in pasture, 70; in timber, 5, hardwood. Acres tillable, 120. Fruit, 25 apple trees. Best adapted to corn, oats, buckwheat and barley. Fences, wire, good. House, medium size, good condition. Outbuildings: cow and horse barn combined, hog house, poultry house and granary. House watered by well, barns and fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$4,375. Terms, cash. Address Watson Bliss, owner, Marathon, N. Y., or J. L. Brink, broker, Marathon, N. Y.

#### TOWN OF MARATHON

Population 1,589

No. 301.—Farm of 220 acres; located 3 miles from Marathon P. O., R. D. 1, and railway station on line of D., L. & W. R. R.; 1 mile from school; 3 miles from churches of all denominations; 2 miles from butter factory; 1 mile from cheese factory; 3 miles from milk station, and 10 miles from condensing plant. Highways, good. Nearest large village, Marathon, population 11,504, 3 miles distant, reached by highways. Surface of farm, partly rolling, rest level. Altitude, 1,200 feet.

Soil, clay loam. Acres in meadow, 80; in natural pasture, 110; in timber, 30, maple, beech and ash. Acres tillable, 175. Fruit, 100 apple, 12 pear, 12 plum and 15 cherry trees, currants, berries, etc. Best adapted to the growing of hay, oats, corn and potatoes. Fences, wire, board and rail, in fair condition. House, 2 story, 20 rooms, fair condition. Outbuildings: horse barn, 30x40; cow barn, 98x36, and 2 silos; barn for tools, 30x26; hen houses, hog house, granary and sugar house. Watered, house by well and cistern, barns by running water, and fields by spring and creek. The Tioughnioga river is 3 miles distant from this farm. Occupied by owner. Reason for selling, advanced age of owner. Price, \$10,000. Terms, ½ down, balance on mortgage. Address Simon W. Carter, owner, Marathon, N. Y., R. D. 1.

No. 302.—Farm of 83 acres; located ¼ mile from Marathon P. O. and railway station, on line of D., L. & W. R. R.; ¾ mile from school and churches; ¼ mile from milk station. Highways, good dirt road. General surface, slightly rolling. Nature of soil, gravel and loam. Acres in meadow, 40; in pasture, 40; in timber 3, small hardwood. Acres tillable, 75. Fruit, 20 apple trees. Best adapted to corn, oats, buckwheat and barley. Fences, wire, good condition. House, medium size, fine condition. Horse and cow barn combined, fair condition. House and barn watered by springs, fields by springs and creek. Occupied by owner. Reason for selling, wishes to retire. Price, \$6,000. Terms, \$3,000 cash, balance easy. Address Edward Dye, owner, Marathon, N. Y., or J. L. Brink, broker, Marathon, N. Y.

No. 303.—Farm of 160 acres; located 4 miles from Marathon P. O., R. D. 1, and railway station, on line of D., L. & W.; 1 mile from school; 1 mile from Presbyterian and Methodist churches; 1 mile from butter factory; 1½ miles from cheese factory; 4 miles from milk station and 8 miles from condensing plant. Highways, good. Nearest city, Cortland, population 11,504, 14 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,200 feet. Soil, clay loam. Acres in meadow, 60; in natural pasture, 50; in timber, 50, hemlock, maple and birch. Acres tillable, 80. Fruit, 15 apple, 10 plum, 4 cherry and 4 pear trees. Best adapted to the raising of corn, cabbage, potatoes, oats and hay. Fences, mostly wire, good condition. House, large, 12 rooms, nearly

new. Outbuildings: cow barn, 36x70; silo and granary; horse barn, 24x40; barn, 30x40; hog house. Watered, house by well, barn, by springs and well, fields, by springs and creek. Occupied by owner. Reason for selling owner wishes to retire. Price, \$5,000. Terms, \$2,000 down, balance on mortgage. Address J. E. Leach, owner, Marathon, N. Y.

No. 304.—Farm of 209 acres; located 2 miles from Marathon P. O., R. D. and railway station, on line of D., L. & W. R. R.; 2 miles from school, churches and milk station. Highways, dirt road, level, good condition. General surface, flat and rolling. Nature of soil, muck and loam. Acres in meadow, 100; in natural pasture, 75; in timber, 35, hemlock and hardwood. Acres tillable, 175. Fruit, pears and apples. Best adapted to wheat, oats, corn, buckwheat and barley. Fences, wire, good condition. House, good condition. Large barn, good condition. House, barn and fields watered by springs. Occupied by owner. Reason for selling, old age. Price, \$8,000. Terms, cash or exchange. Price includes tools, 10 cows and 2 horses. Address Eleanor Hawley, owner, Marathon, N. Y., or J. L. Brink, broker, Marathon, N. Y.

No. 305.—Farm of 225 acres, located 3 miles from Groton P. O. and railway station, on line of Lehigh Valley R. R.; 1 mile from school, and 3 miles from churches. Highways, dirt road, nearly level. General surface, rolling. Nature of soil, loam. Timber, hardwood. Acres tillable, nearly all. Fruit: pears, apples, peaches, plums and small fruits of all kinds. Best adapted to wheat, corn, oats, buckwheat and barley. Fences, wire, good condition. House, 2 sets of buildings, slate roofed, in fine condition. Plenty of barns, in good condition. House, watered by well, barns, by well and fields, by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$16,875. Terms: part cash, balance easy. Address W. L. Coggeshall, owner, Groton, N. Y., or J. L. Brink, broker, Marathon, N. Y.

#### TOWN OF SCOTT

Population 718

No. 306.—Farm of 265 acres; located 2½ miles from Scott P. O.; 5 miles from railway station at Little York, on the Lackawanna R. R.; ½ mile from school; 2½ miles from Methodist and Baptist churches; 2½ miles from butter

and cheese factories; 5 miles from milk station; 11 miles from condensing plant. Highways, nearly level, part hilly. Nearest large village, Homer, population 2,695, 8 miles distant, reached by rail and highway. Surface, rolling. Altitude, 1,200 feet. Soil, light clay loam. Acres in meadow, 75; in natural pasture, 100; in timber, 40, mostly beech and maple. Acres tillable, 145. Fruit, 75 apple and 25 pear trees. Best adapted to the growing of potatoes, oats, cabbage and buckwheat. Fences, line fences good, balance fair. Two houses, 1 two-story, nearly new; other, 1½ stories good condition. Outbuildings: 1 basement barn, 34x100; barn, 30x70; silo, 15x15x28; tool shop; hen house, hog house. Watered, house by well, barns, by brook, fields, by springs. Occupied by owner. Reason for selling, advanced age of owner. Price, \$6,000. Terms, \$2,500 cash, balance on mortgage. Address J. J. Albrow, owner, R. D., Homer, N. Y., or Crandall's Realty Agency, Homer, N. Y.

#### TOWN OF SOLON

Population 518

No. 307.—Farm of 130 acres; located ¾ mile from McGraw P. O., R. D. No. 2; 3 miles from railway station at Solon, on line of D., L. & W. R. R. Nearest city, Cortland, population 11,504, 10 miles distant, reached by rail or State highway. General surface, gently rolling. Altitude, 1,600 feet. Nature of soil, clay loam. Acres in meadow, 60; in pasture, 60; in timber, 15, maple and beech. Acres tillable, 50. Fruit, young apple orchard, some pears, plums and cherries. Best adapted to dairying, oats, potatoes and grains. Fences, barbed wire, good condition. House, 20x40, with shed, good condition. Outbuildings: cow barn, 30x40, with basement, stanchions for 24 cows, silo attached; horse barn, 30x36; hen house; tool shed, 20x45; straw barn, 20x50; all in good condition except straw barn. House and barns watered by running water, fields, by springs and brook. Occupied by tenant. Reason for selling, owner has other farm. Price, \$3,000. Terms, \$1,000 down, balance easy. Address W. D. Shuler, owner, R. D. No. 2, McGraw, N. Y. Will rent with option to buy.

#### (Miscellaneous)

No. 308.—Farm of 90 acres; located 1 mile from Blodgetts Mills P. O. and railway station, on line of D., L. & W.



FIG. 277.—BARLEY FIELD ON FARM NO. 297, TOWN OF HOMER, CORTLAND COUNTY.



FIG. 278.—VIEW ON FARM NO. 297, TOWN OF HOMER, CORTLAND COUNTY.





R. R.; 1 mile from school and churches; 1 mile from milk station; 5 miles from condensing plant. Nearest city, Cortland, population 11,504, 5 miles distant, reached by highway, State road and pavement. General surface, level and hilly. Nature of soil, loam. Acres in meadow, 40; in pasture, 30; in timber, 20, mostly second growth of hardwood.

Best adapted to corn, oats, potatoes and barley. Fences, wire, good condition. House, medium size. Outbuildings, poor. Reason for selling, advanced age of owner. Price, \$3,000. Terms, part down, easy payments. Address Daniel Burt, owner, Blodgetts Mills, N. Y., or J. L. Brink, broker, Marathon, N. Y.

### DELAWARE COUNTY

Area, 1,580 square miles. Population, 45,578. Annual precipitation, 42.7 inches. Annual mean temperature, 45.7°. Number of farms, 5,044. Average price of farm land, including buildings, is \$26.65. County seat, Delhi.

Delaware stands the sixth largest county of the State and is located centrally, distant about seventy miles from Albany.

Its surface is a hilly and mountainous upland, divided into three general ridges by the valleys of the two branches of the Delaware river. In the southern part these ridges form a mountainous region, with high rocky peaks and wild narrow ravines. In the northern part the highlands are less wild and precipitous and the whole region assumes the character of a hilly upland. The soil is generally of a dark reddish color composed of disintegrated rock and shale. In the valleys are many strips of very fertile alluvium. There is considerable fine woodland on the higher portions of the county. The wells, springs, streams, rivers, ponds and lakes are very numerous and remarkable for their purity and clearness and are also noted for the enormous water power they afford.

Dairying is the principal pursuit and the county has become famous for its quality of butter. There are excellent facilities for transportation of all products to the markets of the State, the county being but a short distance from New York city. The valuation of farm property is placed at \$27,714,855, a 25 per cent. increase 12,022; swine, 10,526; sheep, 9,302; poultry, 239,755; total production of milk, over that of 1900. Domestic animals are classified, dairy cows, 78,073; horses, 41,144,471 gallons and total receipts from dairy products, \$4,724,951, these figures being excelled only by St. Lawrence county.

There are good lands in this county which can be purchased for an average price of \$23.88 per acre with fair to good buildings. The principal crops are as follows: Corn, 45,785 bushels; oats, 337,938 bushels; buckwheat, 132,284 bushels; potatoes, 479,060 bushels; hay and forage, 247,773 tons. Apples are grown in abundance and are of the finest quality. Churches of different denominations are scattered throughout and 346 district schools are conveniently located. Twenty-four agricultural associations are devoted to the best interest of the farmer. There are 68 dairy stations and factories in the county averaging over three to each town. Forty-two miles of State road and 2,220 miles of improved highways furnish excellent local transportation facilities.

#### TOWN OF ANDES

Population 2,007

No. 309.—Farm of 350 acres; located 60 rods from Union Grove P. O.; railway station on farm, on line of D. & E. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from church; 4 miles from butter factory; 8 miles from cheese factory; milk station on farm and 8 miles from condensing plant. Highways, good dirt roads. General surface, 100 acres river flat, balance rolling. Altitude, 1,250 feet. Nature of soil, loam and red slate, some gravel. Acres that can be used as meadow, 150; in natural pasture, 100; in timber, 100; timber reserved except

enough for use of farm. Acres tillable, 150. Fruit, several apple trees. Best adapted to corn, oats, buckwheat, rye and hay. Fences, wall, brush, some wire, in fair condition. House, frame, 28x50, 2 stories, large veranda, also a good tenant house. Outbuildings: 2 small barns, 2 hay barns, sheds, etc. Owner expects to build large barn in coming spring. House watered by springs, barns by springs and fields by springs and river. In Catskill Mountains, Delaware river runs length of farm for a mile; good location, fishing, etc. Occupied by caretaker. Reason for selling, bought it for timber and gravel

bank; no use for farm. Price, \$9,000 when barn is built. Terms, \$4,000 cash, balance on mortgage. Address W. T. Austin, owner, Margaretville, N. Y. Owner will rent.

No. 310.—Farm of 197 acres; located  $1\frac{1}{4}$  miles from Andes P. O. and railway station, on line of Delaware & Hudson R. R.; 1 mile from school;  $1\frac{1}{4}$  miles from churches;  $1\frac{1}{4}$  miles from milk station. General surface, hilly, rolling and level. Acres in meadow, 60; in pasture, 100; in timber, 37, bass and hardwood. Acres tillable, 75. Fruit, 175 apple trees, 6 pears and 8 plums. Best adapted to hay, oats, buckwheat and corn. Fences, stone and wire, good condition. House, 11 rooms, modern. Outbuildings: barn, nearly new, 36x52; carriage house, 32x40, good condition. House and barns watered by springs, fields by springs and brooks. Occupied by owner. Reason for selling, wishes to retire. Price, \$8,000. Terms, part cash, balance on time. Trout stream runs through farm. Address D. R. Liddle, owner, Andes, N. Y.

No. 311.—Farm of 100 acres; located 4 miles from Andes P. O., R. D. No. 1, and railway station, on line of Delaware & Eastern R. R.; 1 mile from school;  $\frac{1}{4}$  mile from churches; 4 miles from butter factory and milk station. Nearest large village, Delhi, population 1,736, County Seat, 8 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 40; in pasture, 45. Acres tillable, 50. Fruit, 45 apple, 6 plum, 3 pear and 3 cherry trees. Best adapted to oats, corn, potatoes and buckwheat. Fences, stone and wire, fair condition. House, 34x24, fair condition; wood shed, 14x24. Outbuildings: barn, 30x40, with basement; wagon house, 32x28; blacksmith shop, 34x20. House and barns watered by well and springs, fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,200. Terms, part cash, allow small mortgage. Farm has valuable sugar bush of about 1,000 maples. Address George Sutherland, owner, DeLancey, N. Y., R. D. No. 1.

No. 312.—Farm of 258 acres; located 3 miles from Andes P. O., R. D., and railway station on line of Delaware & Eastern R. R.; 1 mile from school; 3 miles from churches; 3 miles from butter factory and milk station. Highways, State road. Nearest village, Delhi, population 1,736, 11 miles distant, reached by rail or highway. Gen-

eral surface, rolling and level. Altitude, 2,000 feet. Acres can be used as meadow, 100; in pasture, 100; in timber, 58, hard wood. Acres tillable, 200. Fruit, 100 apples, 20 pears, 10 cherries, 12 plums. Best adapted to oats, corn, buckwheat, millet, etc. Fences, stone wall and wire. House, 30x40; furnace, hot and cold water. Outbuildings: barn, No. 1, 32x80 new, stanchions for 40 cows and 4 horses; No. 2, 26x70; horse barn, 26x36; tool house, 20x24; house and barns watered by springs, fields, by springs and brooks. Occupied by owner. Reason for selling, poor health. Price, \$8,000. Terms to suit purchaser. Address, Charles T. Hyzer, owner, Andes, N. Y. Owner will rent.

#### TOWN OF DELHI

Population 2,815

No. 313.—Farm of 220 acres,  $2\frac{1}{2}$  miles from Delhi P. O. and railway station on O. & W. R. R. Good soil. Acres in meadow, 60; pasture, 110; timber, 50. House of 11 rooms, in good condition, hot and cold water. Silo; barn, 100x46; wagon house, 40x60; granary; ice house; hen house; shop and smoke house. Watered by cold springs, with a fine trout brook running through premises. Fences, stone wall and wire, in good condition. The farm will keep 45 or 50 cows and has a good milk market near at hand. Price, \$6,200. Terms, \$3,000 on a 5% mortgage. Name and address of owner, Olive A. Benedict, Delhi, N. Y.

No. 314.—Farm of 80 acres; located  $2\frac{1}{2}$  miles from Delhi P. O., R. D. 3 and railway station; on line of O. & W. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches, butter factory and condensing plant. Highways, good. Nearest village, Delhi, population 1,736,  $2\frac{1}{2}$  miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,600 feet. Soil, red slate loam. Acres in meadow, 18 to 20; in natural pasture, 40; in timber, 20, cherry, basswood and other varieties; acres tillable, 25. Fruit, 20 apple, 2 pear, 2 plum and 2 cherry trees. Best adapted to hay, corn and grain. Fences, stone wall and barbed wire. House, 6 rooms, in good condition. Barn, repaired last year, concrete floor in basement, 18 cow stalls, 3 horse stalls, hog house, hen house and shed. Watered, house and barn, by running water from spring; fields by well. Farm

borders on Little Delaware River. Farm will keep 15 cows and team. Occupied by owner. Reason for selling, to settle an estate. Price, \$2,000. Terms, \$500 cash, balance in monthly payments of \$12 with interest on unpaid principal at 5% or will sell farm, stock and tools for \$3,500. Terms, \$900 cash, balance in monthly payments of \$17 with interest at 5% on unpaid principal. Will sell stock and tools if desired. Address H. D. Archer, owner, Delhi, N. Y.

## TOWN OF FRANKLIN

Population 2,403

No. 315.—Farm of 152 acres; located  $\frac{1}{2}$  mile from Woodford P. O.;  $\frac{3}{4}$  mile from railway station at Northfield on line of O. & W. Ry.; 1 mile from school;  $\frac{3}{4}$  mile from Congregational church;  $\frac{3}{4}$  mile from butter factory, cheese factory and milk station; 8 miles from condensing plant. Nature of highway, smooth and easy for travel. Nearest village, Walton, population 3,103, distance 8 miles, reached by rail and highway. General surface of farm, level. Altitude, 2,500 feet. Nature of soil, red loam. Acres in meadow, 60; in pasture, 70; in timber, 22; all tillable. Fruit, apples, pears, etc. Best adapted to grain, hay and potatoes. Wire fences. House, 12 rooms, fair condition. Outbuildings, barn 50x60, in good repair; hen house 12x18, in fine condition; shop 14x14. House and barns watered by wells; fields, by springs. Delaware and Susquehanna rivers nearby. Reason for selling, poor health. Price, \$3,500. Terms, \$1,000 cash, balance on mortgage. Address Ernest White, owner, 31 Griswold street, Walton, N. Y.

No. 316.—Farm of 155 acres; located 2 miles from Leonta P. O.; 4 miles from railway station at Otego, on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school; 4 miles from churches;  $1\frac{1}{4}$  miles from butter factory; 4 miles from milk station and condensing plant. Highways, hilly, but good. Nearest city, Oneonta, population 9,491, 6 miles distant, reached by highway. General surface level. Nature of soil, good. Acres that can be used as meadow, 50; in natural pasture, 60; in timber, 40; mostly chestnut. Acres tillable, 75. Fruit, apples, different varieties. Best adapted to corn, oats and potatoes. Fences, mostly wire, good condition. House, 10 rooms, good condition. Main barn, large. House and barn watered by spring; fields, by springs and

creek. Occupied by owner. Reason for selling, have two other farms. Price, \$3,250. Terms, \$1,250 cash, balance on mortgage. Address, Leroy Evans, owner, Leonta, N. Y.

No. 317.—Farm of 87 acres; located 3 miles from Leonta P. O.; 3 miles from railway station at Otego, on line of D. & H. R. R.; 2 miles from school; 3 miles from churches; 3 miles from butter factory, milk station and condensing plant. Highways hilly, but good. Nearest city, Oneonta, population 9,491, 6 miles distant, reached by highway. General surface level. Nature of soil good. Acres that can be used as meadow, 25; in natural pasture, 35; in timber, 25, oak and chestnut. Acres tillable, 45. Fruit, 20 apple trees. Best adapted to corn, potatoes and oats. Fences, mostly wire. House, 8 rooms, good condition. Outbuildings, main barn, 30x40; stable room for 8 cows and team, poultry house and hog pen. House watered by well; barns, by creek, and fields, by creek. Reason for selling, has two other farms. Price, \$12,500. Terms, \$4,000 cash, balance on mortgage. Address Leroy Evans, owner, Leonta, N. Y.

## TOWN OF HAMDEN

Population 1,373

No. 318.—Farm of 160 acres; located 4 miles from Delancey P. O., R. D. 1, and railway station, on line of Ontario & Western R. R.; 20 rods from school; 4 miles from churches; 10 rods from butter factory; 5 miles from milk and condensing plant. Highways, hilly, but good. Nearest large village, Delhi, population 1,736, 9 miles distant, reached by rail and highway. Surface of farm sloping and level. Altitude, about 1,200 feet. Soil, loam and gravel loam. Acres in meadow, 50; in natural pasture, 90; in timber, 20, beech, maple, ash, birch and cherry. Acres tillable, 100. Fruit, apples, pears, currants, grapes and raspberries. Best adapted to corn, oats, buckwheat, potatoes, rye, hay, etc. Fences, wire and stone wall, good condition. House, 8 rooms, built in 1912. Outbuildings, barn, 30x52, with annex 12x40, built in 1911; shed; hen house; new barn, 18x20, for machinery; silo, 12x24; wagon house, 30x32, good condition. Sugar bush, 500 trees. Watered by springs. Occupied by owner. Reason for selling, poor health. Price, \$5,350. Terms, \$1,500 down, bal-

ance on easy payments at 5% interest. Price includes farm wagons and machinery. Address T. J. Neish, owner, Delancey, N. Y., R. F. D. 1.

No. 319.—Farm of 185 acres; located 7 miles from Walton P. O., and railway station, on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school;  $2\frac{1}{4}$  miles from churches;  $2\frac{1}{2}$  miles from butter and cheese factory; 7 miles from milk station and condensing plant. General surface hilly and rolling. Altitude, 1,400 feet. Nature of soil, loam, some stone. Acres in meadow, 60; in natural pasture, 85; in timber, 40, hardwood and maple, second growth. Acres tillable, 145. Fruit, 50 apple trees. Best adapted to corn, oats, buckwheat, rye, hay and potatoes. Fences, stone wall, fine condition. House, 7 rooms, good condition. Outbuildings, barn, 40x60, basement addition, 20x30, fair condition. House watered by spring, barns, by creek and fields, by springs. Occupied by tenant. Reason for selling, other business. Price, \$3,500. Terms, easy. Address J. A. Barlow and Fred Lyon, owners, Walton, N. Y., or C. G. Robinson, broker, Walton, N. Y. Owners will rent.

#### TOWN OF HANCOCK

Population 5,191

No. 320.—Farm of 127 acres; located  $\frac{1}{4}$  mile from French Woods P. O.; 4 miles from railway station at Lordville, on line of Erie R. R.;  $\frac{1}{4}$  mile from school, Catholic and Protestant churches; 4 miles from milk station. Highways, good dirt road. Nearest large village, Hancock, 8 miles distant, population 1,320, reached by highway. Surface of farm, rolling. Altitude, about 1,200 feet. Soil, red shell, very good. Acres in meadow, 25; in natural pasture, 60; in timber, 15, hardwood. Acres tillable, 100. Fruit, large orchard of apples, pears and plums. Best adapted to hay, potatoes, etc. Fences, wire and stone, fair condition. House, almost new, 29 rooms. Outbuildings, good sized barn, good condition. Watered, house, by running water, barns, by spring, fields, by lake. Ninety-six acres in lake and  $\frac{1}{2}$  of it belongs to this property. Reason for selling, owner wants to work at his trade. Toilet and bathroom in house. Price, \$8,500. Address Frank L. Gardner, owner, French Woods, N. Y.

No. 321.—Farm of 248 acres; located  $3\frac{1}{2}$  miles from Long Eddy P. O., R. D. No. 1, and railway station, on line of Erie R. R.; 2 miles from school;  $3\frac{1}{2}$  miles from churches and 2 miles from milk station. Highways, dirt road, good condition. General surface, rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, 60; in natural pasture, 70; in timber, 125, hardwood, 1st and 2d growth, 3,000 young maples. Acres tillable, 100. Fruit, good orchard, 85 trees. Best adapted to corn, potatoes, oats, buckwheat and hay. Fences, wire. House, 12 rooms on 1st floor and 19 rooms on 2d floor, good condition. Outbuildings, barn, 50x72, 63 stanchions for cows, 6 single stalls; ice house; milk house and wood house. House and barns have running water, fields watered by springs. Delaware river about 3 miles distant. Occupied by owner. Reason for selling, old age. Price, \$8,000. Terms, easy. Address Mrs. T. M. Hoolinhan, owner, Long Eddy, N. Y., or C. G. Robinson, broker, Long Eddy, N. Y. Owner will rent with option to buy.

#### TOWN OF HARPERSFIELD

Population 1,244

No. 322.—Farm of 252 $\frac{1}{2}$  acres; 1 mile from Harpersfield P. O.; 4 miles from railway station at Stamford, on line of U. & D. R. R.; 12 miles from Richmondville, on D. & H.; 20 miles from Oneonta;  $\frac{1}{4}$  mile from school; 1 mile from churches; 3 miles from butter factory; 2 miles from milk station. Highways, fairly good, not hilly. Nearest village, Stamford, 973 population, 4 miles distant; Oneonta, nearest city, population 9,491. Former reached by highway, latter by rail and highway. Surface of farm, partly rolling, partly level. Soil, good for grass. Acres in meadow, 70; in pasture, 150; in timber, 35, beech, maple, pine and hemlock; acres tillable, 150. Fruit, good young apple orchard, pears. Best adapted to grass, oats, potatoes, rye and buckwheat. Fences, mostly stone wall, in good condition. House, large 12-rooms, in good condition. Barns, 2 large cowbarns, horsebarn, calfstable, hog pen, granary and tool house. Buildings newly painted. Watered, house, by well; barn, by well and springs; fields, by creeks and springs. Delaware river, 4 miles distant; Catskill mountains, 5 miles distant. Possession given at any time.



**FIG. 279.—BUILDINGS ON FARM NO. 325, TOWN OF KORTRIGHT, DELAWARE COUNTY.**



**FIG. 280.—BUILDINGS ON FARM 306, TOWN OF SCOTT, CORTLAND COUNTY.**





Will sell cows, team, tools and crops, or farm alone to suit buyer. Hay, straw and all fodder belong to owner of farm and will be sold with farm, if purchaser desires, and owner will also sell as much of personal property as desired. Reason for selling, advanced age of owner. Price, \$6,000. Terms, part cash, balance to suit buyer. Clear title guaranteed. Address owner, M. S. Wilcox, Jefferson, N. Y. Owner will rent for cash, on shares or with option to buy.

No. 323.—Farm of 253 acres, located 1 mile from Harpersfield P. O.; 4 miles from railway station at Stamford on line of U. & D. Ry.; 80 rods from school; 1 mile from churches: 3 miles from milk station. Highways, in good condition. Nearest village, Stamford, population 973, 4 miles distant. General surface of farm, rolling and level. Acres in meadow, 70; in pasture, 140; in timber, 20, maple, pine and hemlock. Acres tillable, 100. Fine young orchard. Best adapted to corn, oats, potatoes, buckwheat, hay and rye. Fences, wall and wire, in good condition. House, 2 stories, in good condition. Outbuildings, 2 cow barns, horse barn, hog and hen house, granary, feed room, silo 15x15x26. House, barn and fields watered by wells and springs. Catskill mountains and Delaware river nearby. Occupied by tenant. Reason for selling, other business. Price, \$6,000. Terms, part cash, balance on mortgage. Cows, horses, young stock and tools may be purchased if desired. Owner will rent. Address M. S. Wilcox, owner, Jefferson, N. Y.

No. 324.—Farm of 140 acres; located ¼ mile from Stamford P. O. and ½ mile from railway station at Stamford, on line of U. & D. R. R.; ½ mile from school, churches, butter factory and milk station. Highways, State road. Nearest city, Oneonta, population 9,491, 33 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, about 1,800 feet. Soil, red rock, mostly. Acres in meadow, about 30; in natural pasture, 35; in timber, 15, maple and beech. Acres tillable, 65. Fruit, an old and young orchard. Best adapted to hay, grain and gardening. Fences, mostly stone, fair condition. House, medium size, rather old. Outbuildings, good sized barn with silo, good condition. Watered by springs and stream. Occupied by owner. Reason for selling,

owner in other business. Price, \$6,500. Terms, ½ down, balance on bond and mortgage. Address John P. Grant, owner, Stamford, N. Y.

#### TOWN OF KORTRIGHT

Population 1,481

No. 325.—Farm of 189 acres; located 2½ miles from South Kortright P. O., R. D. No. 1 and railway station, on line of U. & D. R. R.; ¾ mile from school; 2½ miles from churches; 6 miles from butter factory; 1½ miles from one creamery and 2½ miles to another. Highways, somewhat hilly, but good. Nearest city, Oneonta, population 9,491, 26 miles distant, reached by rail and highway. Surface of farm, meadows level and rolling. Altitude, about 1,900 ft. Soil, slate and loam. Acres in meadow, 74; in natural pasture, 90; in timber, 25, mostly maple and beech. Acres tillable, 140. Fruit, 100 apple, 5 plum, 2 cherry and 2 pear trees and 1 grape vine. Best adapted to hay, corn, oats, buckwheat, rye and potatoes. Fences, stone wall and wire. House, 28x46, 2 stories, good condition. Outbuildings, barn, 36x56; barn, 18x28; horse barn, 30x50; hog house, 20x26, and hen house, 10x16. Watered, house and barn have water piped from spring; fields, by springs and creeks. Occupied by owner. Reason for selling, owner wants to get smaller place. Price and terms given upon application. Address A. T. Dunn, owner, South Kortright, N. Y.

No. 326.—Farm of 137 acres; located 2 miles from West Kortright P. O.; 2 miles from railway station at Kortright on line of U. & D. Ry.; ½ mile from school; 2 miles from Presbyterian and M. E. churches; 2 miles from milk station. Highways in good condition. Nearest city, Oneonta, population 9,491, distance 16 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil, red slate. Acres in meadow, 40; in pasture, 70; in timber, 27; tillable, 100. Fruit, apples, pears, etc. Best adapted to hay, grain and potatoes. Fences in fair condition. House in good condition. Outbuildings, in fair condition. House watered by springs. Occupied by tenant. Reason for selling, old age. Price, \$2,600, terms easy. Address Mrs. H. C. Bouton, owner, 5 Hickory street, Oneonta, N. Y., or E. Brionne & Co., agents, 23 Duane street, New York City.

## TOWN OF MASONVILLE

Population 1,053

No. 327.—Farm of 100 acres; located  $3\frac{1}{2}$  miles from Masonville P. O.; 8 miles from railway station at Sidney, on line of D. & H. and O. & W. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches and from butter and cheese factories. Highways, hilly, in good condition. Nearest village, Sidney, population 2,507, 8 miles distant, reached by highway. Surface, rolling. Acres in meadow, 40; in natural pasture, 30; in timber, 20; acres tillable, 80. Fences, good. Eight-room house, poor condition. Outbuildings in fair condition. Watered, running water; fields, by springs. Unoccupied. Reason for selling, owner has other business. Price, \$1,050. Terms, \$600 cash, mortgage for \$650. Address F. L. Ostrander, owner, Masonville, Delaware county, N. Y. Owner will rent.

No. 328.—Farm of 15 acres; located 1 mile from Unadilla P. O., R. D. 2; 4 miles from railway station at Maywood, on line of O. & W. R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from cheese factory and Protestant churches; 4 miles from milk station and milk condensing plant. Highways, good. Nearest large village, Sidney, population 2,507, 7 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,400 feet. Soil, loam. Acres in meadow, 8; in natural pasture, 7. Acres tillable, 15. Fruit, 9 apple trees. Best adapted to truck gardening and grass. Fences, wire, stone wall and rail, good condition. House, small, 4 rooms below, upper part not finished. Outbuildings, good sized barn, fair condition, hen house and granary. Watered, house, by well; barn, by spring; fields, by creek. Occupied by owner. Reason for selling, owner a widower and obliged to break up housekeeping. Price, \$900 cash, or \$1,100 with payment of \$600 cash and remainder on mortgage. Address E. A. Fletcher, owner, Hamilton, N. Y. Owner will rent.

No. 329.—Farm of 75 acres; located  $3\frac{1}{2}$  miles from Masonville P. O.; 9 miles from railway station at Sidney, on line of the D. & H. and O. & W. R. R.; near school;  $3\frac{1}{2}$  miles from churches;  $3\frac{1}{2}$  miles from butter and cheese factories. Highways, rolling, but in good condition. Nearest large village, Sidney, population 2,507, 9 miles distant, reached by highway. Surface, rolling and partially

hilly. Acres in meadow, 25; in natural pasture, 40; in timber, 10; acres tillable, 60. Fences, wire and stone wall, in good condition. House, 8 rooms, fair condition. Barn room for 15 cows and 3 horses. Watered, house, by running water and wells; fields, by springs. Occupied. Reason for selling, owner has other business. Price, \$1,250. Terms, \$500 cash, balance on mortgage at 5%. Address F. L. Ostrander, owner, Masonville, Delaware county, N. Y.

## TOWN OF MEREDITH

Population 1,393

No. 330.—Farm of 173 acres; located 7 miles from Delhi P. O., R. D. 2; 3 miles from railway station at East Meredith, on line of U. & D. R. R.; 3 miles from church; 1 mile from butter factory and milk station; 7 miles from milk condensing plant. Nearest city, Oneonta, population 9,491, 12 miles distant. Surface of farm, rolling. Altitude, about 1,800 feet. Acres in meadow, 50; in natural pasture, 80; in timber, 43. Hard wood; acres tillable, 120. Fruit, apples. Best adapted to hay and potatoes. Fences, stone and wire, good condition. House, 16 rooms, good condition. Barns, in fair condition. Watered by living spring. Occupied by owner. Reason for selling, poor health of owner. Price, \$6,500, including hay, stock, etc. Address Miss Johanna R. Spier, owner, Delhi, N. Y., R. D. 2.

No. 331.—Farm of 100 acres; located 2 miles from Meridale P. O. and railway station, on line of U. & D. R. R.; 3 miles from school;  $\frac{1}{2}$  mile from church;  $1\frac{1}{2}$  miles from butter factory; 3 miles from milk station, and 5 miles from condensing plant. Highways, good. Nearest city, Oneonta, population 9,491, 12 miles distant, reached by highway or rail. General surface, nearly level. Altitude, 2,000 feet. Nature of soil, loam. Acres that can be used as meadow, 40; in natural pasture, 40; in timber, 20. Hardwood. Acres tillable, 80. Fruit, apples, pears, etc. Fences, stone and wire. House, 9 rooms, fair condition. Barn, 70x60, good condition. House and barn watered by spring, fields, by spring and brook. Occupied by owner. Reason for selling, other business. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Address F. D. Mackey, owner, Meridale, N. Y.



**FIG. 281.—HOUSE ON FARM NO. 340, TOWN OF SIDNEY, DELAWARE COUNTY.**



**FIG. 282.—HOUSE ON FARM NO. 350, TOWN OF CLINTON, DUTCHESS COUNTY.**



No. 332.—Farm of 250 acres; located 3 miles from East Meredith P. O. and railway station, on line of U. & D. R. R.;  $1\frac{1}{2}$  miles from school; 3 miles from churches;  $1\frac{1}{2}$  miles from butter factory and 3 miles from milk station. Highways, good. Nearest city, Oneonta, population 9,491, 8 miles distant, reached by rail or highway. General surface, rolling. Altitude, 2,200 feet. Nature of soil, loam. Acres that can be used as meadow, 100; in natural pasture, 100; in timber, 50, hardwood. Acres tillable, 200. Fruit, apples and pears. Best adapted to hay, oats, potatoes, etc. Fences, stone and wire. House, 9 rooms, new. Barn, 34x60, good condition. House, barns and fields watered by springs. Occupied by owner. Reason for selling, other business. Price, \$4,000. Terms, \$1,500 cash, balance on mortgage. Address D. H. Mackey, owner, Meridale, N. Y.

## TOWN OF MIDDLETOWN

Population 3,802

No. 333.—Farm of 106 acres; located  $\frac{1}{2}$  mile from Margaretville P. O. and railway station on line of Delaware and Eastern R. R.;  $\frac{1}{2}$  mile from school and churches; 1 mile from butter factory and milk station. General surface, rolling. Altitude 1,400 feet. Acres in meadow 50, in timber 25, hemlock and hardwood. Acres tillable, 80. Fruit, 100 apple trees, some pears. Best adapted to hay, corn, oats, rye and buckwheat. Fences, wire, new. No house. Barn 30x50, well painted, 2 floors. Barn watered by springs; fields by springs and brook. Farm is located in Catskill mountains,  $\frac{1}{4}$  mile from Delaware River. Occupied by owners. Reason for selling, owners bought farm for timber, have no use for the land, hemlock will be reserved. Price \$1,500. Terms, one-third cash, balance on mortgage. Address Austin and Marks, owners, Margaretville, N. Y.

No. 334.—Farm of 144 acres; located 2 miles from New Kingston P. O.; 7 miles from railway station at Margaretville, on line of D. & E. R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from church; 2 miles from butter factory, cheese factory and milk station. Highways, good. General surface rolling and smooth. Altitude 1,500 feet. Nature of soil, red slate. Acres that can be used as meadow 40, in natural pasture 80, in timber 24, maple, birch, basswood, oak

and beech. Acres tillable, 40. Fruit, 50 apple trees, some pears, nice berry patch. Best adapted to corn, oats, buckwheat and hay. Fences, wall and wire, in good condition. House, 24x40, 2 stories, hot air furnace, hot and cold water. Outbuildings; barn 50x50, 3 floors, silo, 2 poultry houses, one new, all in good condition. House and barns, watered by springs and fields, by springs and brook. Catskill mountains and Delaware river, 5 miles distant. Reason for selling, more land than owner can handle. Price, \$5,000. Terms, one-third cash, balance on mortgage. Address W. T. Austin, owner, Margaretville, N. Y. Owner will rent.

## TOWN OF SIDNEY

Population 4,148

No. 335.—Farm of 135 acres; located  $\frac{1}{4}$  mile from post office and railway station at Franklin Depot, on line of O. & W. R. R.;  $\frac{1}{4}$  mile from school and 2 creameries;  $2\frac{1}{2}$  miles from condensing plant. Highways, good. Nearest large village, Walton, population 3,500, 10 miles distant, reached by rail and highway. Sidney Center, population 600, is  $2\frac{1}{2}$  miles from farm. Sidney, population 2,507, is 10 miles distant. Surface, nearly level, part slightly rolling. Soil, red and part rich loam. Acres in meadow, 45; in natural pasture, 55; in good lot, 36; acres tillable, 100. Fruit, apples. Best adapted to grass, oats, corn, buckwheat, millet and potatoes. Fences, wire, board and stone wall. House, 12 rooms, good condition. Outbuildings: barn, 42x64, cow stable attached, with new concrete floors; barn, 26x36, wagon house attached, 5 good horse stalls, silo. Watered, house, by never-failing spring water, which runs to house; barns and fields, by spring and creek. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$4,000. Terms, \$1,000 cash, balance on easy terms, 5%. Will sell cows and farm implements. Address M. B. Fish, owner, Sidney, N. Y.

No. 336.—Farm of 140 acres; located 2 miles from Unadilla P. O., R. D., and railway station, on line of D. & H. R. R.;  $1\frac{1}{4}$  miles from school; 2 miles from churches; 2 miles from milk station and condensing plant. Population of Unadilla 1,009, reached by State highway. General surface, rolling. Altitude, 1,200 feet. Nature of soil, sandy loam, creek and river bottom. Acres

in meadow, 100; in pasture, 40; in timber, 6, beech, maple and chestnut. Acres tillable, 125. Fruit, 100 apple trees. Best adapted to corn, oats, buckwheat and potatoes. Fences, mostly wire, good condition. House, 11 rooms, fair condition. Outbuildings, basement barn 30x88, concrete floor, 2 silos, wagon barn 24x30, 5 poultry houses; buildings not painted but in fair condition. House and barns watered by springs, fields, by creek and river. Susquehanna River borders farm. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$7,500. Terms,  $\frac{1}{3}$  down, balance at 5%. Address E. C. Birdsall, owner, Youngs, N. Y., or F. B. Wells, broker, Sidney, N. Y.

No. 337.—Farm of 140 acres; located  $\frac{1}{2}$  mile from Youngs P. O. and railway station, on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{2}$  mile from milk station and condensing plant. Nearest village, Sidney, population 2,507, reached by rail or good highway, 6 miles distant. General surface, level, some hills. Altitude, 1,100 feet. Nature of soil, clay and loam. Acres in meadow, 50; in pasture, 60; in timber, 30, maple, chestnut and beech. Acres tillable, 80. Fruit, 50 apple trees. Best adapted to corn, oats, potatoes, hay and buckwheat. Fences, mostly wire, good condition. House, 11 rooms, painted and in good condition. Outbuildings: basement barn 40x60, wagon barn, 24x30, poultry house 12x16, all in good condition. House and barns watered by springs, fields, by creek and springs. Occupied by owner. Reason for selling, desires smaller place. Price, \$5,500. Terms, \$1,800 cash, balance at 5%. Address Eugene De Forest, owner, Unadilla, N. Y., or F. B. Wells, broker, Sidney, N. Y.

No. 338.—Farm of 18 acres; located  $1\frac{1}{2}$  miles from Youngs P. O. and railway station, on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches;  $1\frac{1}{2}$  miles from condensing plant. Nearest village, Sidney, 6 miles distant, population 2,507, reached by rail or good level highway. General surface, level. Altitude, 1,100 feet. Nature of soil, sandy loam. Acres in meadow, 12; in pasture, 6. Acres tillable, 13. Fruit, 20 apple trees, some small fruit. Best adapted to corn, potatoes and grain. Fences, wire,

good condition. House, 10 rooms, good condition. Basement barn 24x30, poultry house 10x12, fair condition. House and barns watered by wells, fields, by spring and creek. Occupied by owner. Reason for selling, advanced age. Price, \$2,000. Terms, one-half down, balance at 5%. Address Wm. Stone, owner, Youngs, N. Y., or F. B. Wells, broker, Sidney, N. Y.

No. 339.—Farm of 250 acres; located  $1\frac{1}{2}$  miles from Sidney P. O. and railway station on line of D. & H. R. R. and N. Y., O. & W. R. R.; near school;  $1\frac{1}{2}$  miles from churches, butter and cheese factory and milk station. Population of Sidney, 2,507, reached by good highway. General surface, level, some hills. Altitude, 1,000 feet. Nature of soil, sandy loam. Acres can be used as meadow, 100; in pasture, 100; in timber, 50, chestnut, pine and hardwood. Acres tillable, 150. Fruit, 100 apple trees, few pears and plums. Best adapted to corn, oats, potatoes and rye. Fences, wire and rail, good condition. House, 14 rooms, all modern conveniences. Outbuildings, basement barn, 40x120; barn, 36x80; barn, 16x75; horse barn, 35x80; ice house, 2 poultry houses and milk house. Eleven buildings on place, all slate roofs, painted and electric lighted. House watered by spring and city water; barns by springs, fields by spring, creek and river. Susquehanna river borders on farm. Occupied by owner. Reason for selling, wishes to retire. Price, \$30,000. Terms, one-half down, balance on mortgage at 5%. Address A. E. Vandervoort, owner, Sidney, N. Y., or F. B. Wells, broker, Sidney, N. Y.

No. 340.—Farm of 120 acres; located at Youngs on line of N. Y., O. & W. R. R.; near school and churches; 50 rods from condensing plant. Nearest large village, Sidney; population, 2,507; reached by rail or good gravel highway. General surface, level, some hills. Altitude, 1,100 feet. Nature of soil, hardpan, subsoil and loam. Acres in meadow, 50; in pasture, 45; in timber, 20, beech, maple and chestnut. Acres tillable, 80. Fruit, 60 apple trees, other fruit. Best adapted to hay, corn, potatoes, oats and buckwheat. Fences, mostly wire, good condition. House, 14 rooms, with all modern conveniences. Good condition. Outbuildings, basement barn, 46x60;

granary, 12x16; poultry house, 12x20; ice house, garage, tenant house, all in good condition. House and barns watered by springs; fields, by springs and creek. Occupied by owner. Reason for selling, desires smaller place. Price, \$8,500. Terms,  $\frac{1}{4}$  cash, balance to suit purchaser. Address T. W. Logan, owner, Youngs, N. Y., or F. B. Wells, broker, Sidney, N. Y.

No. 341.—Farm of 150 acres; located  $1\frac{1}{4}$  miles from Sidney P. O., R. D.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{4}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory, cheese factory and milk station and 5 miles from condensing plant. Highway, good, very little hill. General surface, rolling, pasture portion is hilly. Altitude, 1,000 feet. Nature of soil, loam, some hardpan. Acres in meadow, 60; in natural pasture, 60; in timber, 25, chestnut, oak, beech and maple. Acres tillable, 70. Fruit, 50 apple trees, standard varieties. Best adapted to hay, potatoes, corn, oats and buckwheat. Fences, rail and wire, good condition. House, 11 rooms, good condition. Outbuildings, 2 barns, 40x50 and 24x36. Hog pens, poultry house, fair condition. House watered by spring, barns by spring, fields by spring and creek.  $1\frac{1}{2}$  miles to Susquehanna river. Occupied by owner. Reason for selling, wants a smaller place. Price, \$4,500. Terms, \$2,300 down, balance at 5%. \$7,000 for farm, stock, tools and machinery. Excellent grass farm, school facilities and markets. Address H. C. Dedrick, owner, Sidney, N. Y., or F. B. Wells, agent, Sidney, N. Y.

No. 342.—Farm of 176 acres; located 1 mile from Sidney P. O., R. D.; 1 mile from railway station on line of O. & W. and D. & H. R. Ra.;  $\frac{1}{2}$  mile from school; 1 mile from churches;  $1\frac{1}{2}$  miles from butter factory;  $1\frac{1}{2}$  miles from cheese factory and 1 mile from milk station; 5 miles to nearest condensing plant. Highways good, mostly level. General surface, river flats and low table land near river. Altitude, 1,000 feet. Nature of soil, loam, very few stones, in high state of cultivation. Acres in meadow, about 80; in natural pasture, about 50; in timber, 20; 15 acres excellent alfalfa. Trees, maple, beech and chestnut. Acres tillable, about 140. Fruit, 100 apple, 15 plum, 15 cherry, and 10 pear trees and 15 grape vines. Plot of strawberries. Standard varieties of

these fruits. Best adapted to hay, corn, potatoes, oats, rye and alfalfa. Fences, largely wire, excellent condition. House, 12 rooms, hot and cold water, bath and toilet. Partial steel ceilings, newly painted. Outbuildings, barn, 40x100, 26 post above basement; horse barn, 24x36, poultry house, hog pens, 2 silos, granary, all in first class condition. House watered by spring in kitchen; barns, by spring; fields, by spring, creek and river. Susquehanna river borders farm. Occupied by owner. Reason for selling, owner desires to retire to small farm. Price, \$18,000. Terms,  $\frac{1}{2}$  down, balance at 5%. Stock and tools if wanted at market value. Buildings insured for \$10,000,  $\frac{3}{4}$  value. Address F. M. Sager, owner, Sidney, N. Y., or F. B. Wells, agent, Sidney, N. Y.

No. 343.—Farm of 80 acres; located  $1\frac{1}{2}$  miles from Sidney P. O., R. D.; on line of D. & H. and O. & W. R. Ra.;  $1\frac{1}{2}$  miles from high school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory and milk station; 5 miles from condensing plant. Highways, hilly. General surface, hilly, meadow portion nearly level. Altitude, 1,200 feet. Nature of soil, clay and hardpan. Acres in meadow, 20; in natural pasture, 40; in timber, 20, mostly chestnut and soft wood. Acres tillable, 30. Fruit, very little, some apples. Best adapted to potatoes, oats, buckwheat, hay. Fences, rail and wire, good condition. House, 6 rooms, rebuilt this year. Outbuildings, barn, small and poor. House watered by well, barns by springs. Susquehanna river  $1\frac{1}{2}$  miles distant. Occupied by tenant. Reason for selling, owner wishes to use proceeds in stock business. Price, \$2,000. Terms, \$900 down, balance, easy terms. Address J. H. Bedell, owner, Sidney, N. Y., or F. B. Wells, agent, Sidney, N. Y.

## TOWN OF STAMFORD

Population 2,113

No. 344.—Farm of 500 acres; located  $2\frac{1}{2}$  miles from South Kortright P. O. and railway station, on line of U. & D. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from Protestant church;  $2\frac{1}{2}$  miles from milk station. Highways, good. Nearest large village, Stamford, population 973, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,400 feet. Soil, rich loam. Acres

in meadow, 100; in natural pasture, 200; in timber, 200, hardwood enough to pay for farm; 800 sugar maple trees. Acres tillable, 300. Fruit, apples, pears, plums, etc. Best adapted to grass, grain, potatoes, etc. Fences, stone wall and wire. House, 9 rooms, good condition. Outbuildings, large barn, wagon house and hen house, good condition. Watered by springs and creek. Occupied by owner. Reason for selling, dissolving partnership. Price, \$12,000. Terms, \$4,000 cash. 40 cows, 3 horses, wagons, tools, crops, 600 sap buckets, etc., included in above price. Address Triolo I. Marvola, owner, South Kortright, N. Y., or E. Brionne & Co., 23 Duane Street, New York City.

No. 345.—Farm of 337 acres; located 3 miles from Stamford P. O. and railway station on line of U. & D. Ry.;  $\frac{1}{2}$  mile from school; 1 mile from Methodist church; 3 miles to churches of all denominations; 3 miles from milk station. Highway in good condition. Nearest village, Stamford, population 973. General surface of farm, rolling. Nature of soil, loam. Acres in meadow, 100; in pasture, 200; in timber, 37; acres tillable, 300. Fruit, apples, pears, etc. Best adapted to hay, grain, potatoes, etc. Wire fences. House, 14 rooms, hot and cold water, bath, etc. Outbuildings, large barns, concrete floors in fine condition. House, barns and fields watered by spring. Occupied by owner. Reason for selling, ill health. Price, \$16,000. Terms, part cash. 46 cows, 16 heifers, 16 calves, 14 hogs, 4 horses, all tools and crops included in price. Address Fred Webster, owner, Stamford, N. Y., or E. Brionne & Co., agents, 23 Duane street, New York City.

#### TOWN OF WALTON

Population 5,088

No. 346.—Farm of 90 acres; located  $5\frac{1}{2}$  miles from Walton P. O., R. D. No. 3; 2 miles from railway station at Northfield, on line of N. Y., O. & W. R. R.;  $1\frac{1}{2}$  miles from school, Congregational church and milk station;  $5\frac{1}{2}$  miles from milk condensing plant. Highways, good. Surface of farm, rolling. Altitude, 1,400 feet. Soil, red loam. Acres in meadow, 30; in natural pasture, 40; in timber, 20, maple, beech, birch and cherry. Acres tillable, 60. Fruit, apples, cherries and pears, also currants, raspberries and strawberries. Adapted

to all crops grown in this climate. Fences, stone wall and wire, good condition. House, 30x40, good condition. Outbuildings, barn, 40x60, 3 floors, concrete floor in basement; wagon shed, 20x40; hen house, 12x40. Watered, house and barn by running water, fields, by springs and brook. Occupied by owner. Reason for selling, poor health of owner. Price, \$4,600. Terms, \$2,000 down, balance at 5% interest. 16 head of cattle, horses and all farming and dairy utensils go at above price. Address John T. Williams, owner, Walton, N. Y., R. D. No. 3.

No. 347.—Farm of 256 acres, located  $\frac{3}{4}$  mile from Beerston P. O. and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{2}$  mile from milk station and  $4\frac{1}{2}$  miles from condensing plant. General surface, 60 acres level, balance hilly. Altitude, 1,000 feet. Nature of soil, loam. Acres in meadow, 60; in natural pasture, 40; in timber, 156, hardwood and chestnut. Acres tillable, 60. Fruit, 25 apple trees. Best adapted to corn, potatoes, oats, buckwheat and hay. Fences, stone wall and wire, very good. Ten-room house, fine condition. Outbuildings, 1 new barn, 36x56, with basement; hay barn and horse barn. Watered: house, barns and fields, by running water. Occupied by tenant. Reason for selling, other business. Price, \$5,500. Terms, part cash. Address David Moore, owner, Walton, N. Y., or C. G. Robinson, broker, Walton, N. Y.

No. 348.—Farm of 150 acres located  $\frac{1}{4}$  mile from Beerston P. O. and railway station; on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from church;  $\frac{1}{2}$  mile from milk station and 5 miles from condensing plant. Highways, good dirt road. Nearest village Walton, population 3,103,  $4\frac{1}{2}$  miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,000 feet. Nature of soil, gravel loam. Acres in meadow, 35; in natural pasture, 40; in timber, 75, hardwood, second growth. Acres tillable, 35. Fruit, 30 apple trees of different varieties. Best adapted to corn, potatoes, oats, buckwheat and hay. Fences, wire, fair condition. Thirteen-room house, fair condition. Outbuildings, barn, 40x60, concrete stables; silo, 11x22; poultry house, fair condition. House and barns watered by well, fields, by Delaware river. Occupied by tenant. Reason for selling, other business. Price,

\$4,000. Terms, \$1,000 cash, balance on mortgage. Address Mrs. Hattie M. Beers, owner, Walton, N. Y., or C. G. Robinson, broker, Walton, N. Y. Owner will rent with option to buy.

## DUTCHESS COUNTY

Area, 810 square miles. Population, 87,661. Annual precipitation, 54.1 inches. Annual mean temperature, 50.9°. Number of farms, 3,600. County seat, Poughkeepsie.

This county lies on the eastern line of the State bounded by Connecticut on the west and by the Hudson river on the east, about midway between Albany and New York City.

Its surface is principally rolling and hilly. A wide valley running north and south through the entire portion of the county, bounded on the east by the Taghkanick mountains and on the west by the Matteawan and Fishkill range. Within this valley lie some of the finest farms of the State. The county is rich in mineral rocks and near its center there are quarries of marble, pure, white, fine grain and susceptible to high polish. The soil of the county is generally of a fine quality of sandy and gravelly loam. Agriculture is the leading industry and offers attractions to the farmer on account of the variety and fertility of the soil and the nearness to the markets of New York City. As choice apples as can be grown anywhere are grown in this county, many of which are exported to Europe. The principal crops are corn, 744,303 bushels; oats, 468,039 bushels; wheat, 32,920 bushels; buckwheat, 54,504 bushels; rye, 80,229 bushels; potatoes, 300,275 bushels; hay and forage, 122,406 tons. Domestic animals are reported as follows: Dairy cows, 31,241; horses, 10,945; swine, 19,798, sheep, 14,719; poultry, 236,074. The average price of farm land with buildings is \$58.52 per acre. The total valuation of all farm property is \$32,968,710, an increase of nearly \$8,000,000 over the value given in the census of 1900. This increase is exceeded only by six other counties of the State. The dairies of the county produced 18,869,564 gallons of milk and the receipts for the sale of dairy products were \$2,084,655.

There are twenty-nine agricultural organizations in the county, including twenty-four granges; also thirty-two milk stations and factories. The educational advantages are extraordinary, there being 183 district schools, several standard high schools and St. Stephen's College at Annandale. Vassar, one of the leading women's colleges in the country, is located at Poughkeepsie, together with private and military academies. Dutchess county presents great possibilities for farm investment and general farming, in common with a large number of the other counties of the State.

## TOWN OF AMENIA

No. 349.—Farm of 263 acres;  $\frac{1}{2}$  mile from South Amenia P. O., R. D.;  $2\frac{1}{2}$  miles from Wassaic, on line of Harlem R. R. Highways, good. Soil, gravelly loam. Acres in meadow, 176; tillable, 175; natural pasture, 40; timber, 50, chestnut, oak, maple and hickory. Fruit, 100 apple trees, Red Astrachan, Greening, Maiden Blush, etc. Adapted to all crops. Fences, wire, in good condition. House, 2-story, 8-room, with lean-to, all new. Barn, large, 3 stories, in good condition. Premises watered by springs and brook. Farm lies in valley,  $1\frac{1}{2}$  miles wide, at the foothills of the Taghkanic range. Reasons for selling, to close an estate. Price, \$15,000. Terms, part cash, balance on mortgage. Address Edward G. Reynolds, owner, Dover Plains, N. Y. Owner will rent.

## TOWN OF CLINTON

Population 1,278

No. 350.—Farm of 247 acres; located  $3\frac{1}{2}$  miles from Clinton Corners P. O., and railway station, on line of C. N. E. R. R.;  $\frac{1}{2}$  mile from school and churches; 3 miles from butter factory and milk station. General surface, level, rolling and some hilly. Altitude, 600 feet. Nature of soil, Dutchess silt, Dutchess slate. Acres in meadow, 60; in timber, 15, oak and chestnut. Acres tillable, 200. Fruit, 75 to 100 apple trees, 20 years old, peaches and pears. Best adapted to hay, corn, oats and rye. Fences, rail and stone, fair condition. House, 2 stories and basement, 12 rooms, fine condition. Outbuildings, large barns, carriage house, poultry house and other outbuildings in fair condition. House and barns watered by wells, fields, by

spring and streams. Occupied by owner. Reason for selling, advanced age. Price, \$7,500. Terms, \$4,500 cash, balance on mortgage. Address, Geo. B. Welch, owner, Clinton Corners, N. Y., or Edward C. Dayton, broker, Poughkeepsie, N. Y.

No. 351.—Farm of 125 acres; located 3 miles from Clinton Corners P. O. and railway station on line of C. N. E. R. R.; 1 mile from school and churches; 3 miles from milk station. Highways, good gravel roads, little hilly. Altitude, 600 feet. General surface, level, rolling and hilly. Acres in meadow, 15; in timber, 3, mostly oak. Acres tillable, 100. Fruit, apple orchard, 200 trees, 20 years old; 100 trees, 7 years old, and 20 thirty-five-year-old trees. Best adapted to hay, corn, oats and potatoes. Fences, stone, rail and wire. House, large, 2 stories, frame, 12 rooms, slate roof, good condition. Barn, carriage house and all need some repairs. House and barns watered by well; fields, by spring and small brook. Occupied by tenant. Reason for sellin, to settle an estate. Price, \$5,000. Terms, cash. Address, Mason Sherow, owner, Poughkeepsie, N. Y., or Edward C. Dayton, broker, Poughkeepsie, N. Y.

No. 352.—Farm of 146 acres, located 2 miles from Clinton Corners P. O., R. D. 52 and railway station on line of Central New England Ry.; 1 mile from school; 2 miles from churches; 2 miles from milk station. Highway, hilly, but in good condition. Nearest city, Poughkeepsie, population 27,936, distance 14 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 500 feet. Nature of soil, loam. Acres in pasture, 30; in timber, 12, oak, chestnut and maple. Acres tillable, 104. Fruit, 150 apple and 500 peach trees. Best adapted to corn, oats, rye, potatoes, hay and fruit. Fences, stone, in fair condition. House, 30x40, 6 rooms and attic, cellar 15x18. Outbuildings, barn 30x50, shed 16x30, horse and cattle stable, in good condition. Watered: house, by well; barns, by spring; fields, by spring. Long Lake 2 miles distant. Occupied by tenant. Price, \$3,500; terms, \$1,500 cash, mortgage for \$2,000. Address, James C. Allen, owner, Clinton Corners, N. Y., or J. Sterling Drake, agent, 29 Broadway, New York City.

No. 353.—Farm of 115 acres, located 2½ miles from Salt Point P. O., R. D. 54 and railway station on line of Central New England Ry.; ½ mile from

school; 2½ miles from Presbyterian and Methodist churches; 3 miles from butter factory; 2½ miles from milk station. Highways, in good condition. Nearest village, Salt Point, population, 400, reached by highway. General surface of farm, hilly. Altitude, 400 feet. Nature of soil, Dutchess slate loam. Acres in pasture, 9; in timber, 6, oak and chestnut; tillable, 100. Fruit, 10 acres of apples, other fruit for home use. Best adapted to fruit and general farm crops. Fences, stone and wire, in good condition. House, frame, 1½ stories, 9 rooms, very good. Outbuildings, barn 30x55, wagon house 24x36, corn, hog, poultry and wood houses, in good condition. Watered: house by cistern and well; barns by spring and well; fields by springs and creek. Long Lake, 2 miles distant. Occupied by owner. Price, \$5,500. Terms, half cash, balance on mortgage. Address, Gilbert Rhodes, owner, Clinton Corners, N. Y., or Chas. E. Rogers, agent, 35 Market street, Poughkeepsie, N. Y.

#### TOWN OF DOVER

Population 2,016

No. 354.—Farm of 189 acres; situated 3 miles from Dover Plains, on Harlem branch of the N. Y. C. & H. R. R. R. R. Soil, red loam. Acres of meadow, 80; acres of pasture, 109. House, 15 rooms, in fair condition. Barns and outbuildings, ample for the use of the farm and in fair condition. Fences, stone wall and wire, in fair condition. Watered by wells and springs. Farm will keep 45 head of cattle and 5 horses. Price, \$50 per acre. Terms, to suit the purchaser. Name and address of owner, John Coyle, Jr., Dover Plains, N. Y.

No. 355.—Farm of 630 acres; located 2 miles from Wingdale P. O. and railway station on line of N. Y. C. & H. R. R. R.; ½ mile from school; 1 mile from churches, Methodist and Baptist; 2 miles from Borden's milk station. Highways, in good condition. Nearest city, Poughkeepsie, population 27,936, distance 25 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 400 feet. Nature of soil, loam; acres in meadow, 350; in pasture, 50; in timber, 200. Best adapted to tobacco, oats, corn, wheat, etc. Fences, stone and wire. Three houses, one 85 feet long, 2 smaller. Outbuildings, several barns, 1 barn is very spacious, accommodating 60 head of cattle and 6 horses, also room for young stock; a number of outbuild-

ings. Water piped from spring to house; fields watered by river and springs. Occupied by owner. Price, \$55,000. Terms, \$30,000 cash, remainder on long payments. Address A. P. Bedell, owner, Wingdale, N. Y.

## TOWN OF EAST FISHKILL

Population 2,226

No. 356.—Farm of 150 acres, located  $1\frac{1}{2}$  miles from Hopewell P. O. and railway station on line of C. N. E. and N. Y., N. H. & H. Ry.;  $1\frac{1}{2}$  miles from school, Catholic and Reformed churches;  $1\frac{1}{2}$  miles from milk station. Highways in good condition. Nearest city, Beacon, population 11,040, distance 10 miles, reached by rail and highway. General surface of farm, level. Nature of soil, loam. Acres in pasture, 10; in timber, 28; tillable, 112. Best adapted to general farming. Fences, stone, rail and wire in good condition. House,  $2\frac{1}{2}$  stories, good condition. Outbuildings, cow and hay barn, concrete floor; granary, chicken house, carriage house and shed for tools. Watered, house by well and cistern, fields by trout stream through farm. Occupied by owner. Price, \$8,000. Good steamboat and railway service. Address Mrs. J. D. Van Vlack, owner, R. D., Hopewell Junction, N. Y., or E. J. Webb, agent, 114 Main street, Beacon, N. Y.

## TOWN OF FISHKILL

Population 13,858

No. 357.—Farm of 63 acres; located  $2\frac{1}{2}$  miles from Fishkill-on-Hudson P. O.; 3 miles from railway station at Fishkill Landing, on line of N. Y. C. & H. R. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from Catholic and Protestant churches;  $1\frac{1}{2}$  miles from milk station. Highways, State road to within  $\frac{1}{4}$  mile of farm. Surface of farm, rolling. Altitude, 200 to 300 feet. Soil, Dutchess silt. Acres in meadow, 16; in natural pasture, 18. Fruit, 500 peach trees 9 years old, 500, 8 years old, 700, 7 years old, 300, 5 years old, and 3 acres of apples. Best adapted to peaches. Fences, some wire and some stone wall, good. House, 6 rooms, good condition. Outbuildings are ample for size of farm and in good condition; 1 barn, new. Watered by well and cistern. Occupied by owner. Reason for selling, owner has too much land. Price, \$7,000. Terms,  $\frac{1}{2}$  cash. Address J. V. R. Verplanck, owner, Beacon, N. Y., or Edwin J. Webb, agent, Fishkill-on-Hudson, N. Y.

No. 358.—Farm of 140 acres; located 4 miles from Fishkill P. O., and railway station on line of C. N. E. Ry.; 4 miles from school; 4 miles from Reformed, Episcopal and Methodist churches. Highways, in good condition. Nearest city, Beacon, population 11,040, distance 9 miles; reached by rail and highway. General surface of farm, level. Acres in meadow, 20; tillable, 100. Fruit, apple orchard of 5 acres. Best adapted to general farming. House, 10 rooms, in fair condition. Outbuildings: good carriage house and ample barns. Watered; house, by several springs; fields, by running streams. Occupied by tenant. Price, \$6,000. Terms,  $\frac{1}{2}$  cash. Address J. J. Huestis, owner, R. D. 2, Fishkill, N. Y., or E. J. Webb, agent, 114 Main street, Beacon, N. Y.

No. 359.—Farm of 10 acres; located  $1\frac{1}{2}$  miles from Fishkill P. O.;  $2\frac{1}{2}$  miles from railway station at Chelsea, on line of N. Y. C. R. R.; 2 miles from school; 2 miles from churches. Highways, good. Nearest city, Beacon, population 11,040, 4 miles distant, reached by highway. General surface, level. Nature of soil, limestone. Acres can be used as meadow, all; in natural pasture, 5. Acres tillable, all. Fruit, 20 apple trees and plenty of grapes. Best adapted to general crops. Fences, stone, good condition. House, 6 rooms, hot water heat. Barns, good condition. House watered by well and cistern, barns, by well and fields, by well. Occupied by owner. Reason for selling, death in family. Price, \$3,300. Price includes stock and tools. Address Mr. Fitzpatrick, owner, Fishkill, N. Y., or L. H. Whittemore, broker, 131 Main St., Beacon, N. Y.

No. 360.—Farm of 100 acres; located 6 miles from Fishkill P. O. and railway station on line of C. N. E. Ry., 6 miles from school, Methodist, Episcopal and Reformed churches. Highway in good condition. Nearest city, Beacon, population 11,040, distance 11 miles, reached by rail and highway. General surface of farm, level. Acres tillable, 50. Fruit, 60 trees, apples, pears and plums. House, 7 rooms, in fair condition. Barns are large. Watered, house by well; barns, by running water; fields, by springs and stream. Fishkill mountains nearby. Occupied by owner. Price, \$2,000. Address Jas. E. Stevens, owner, Fishkill, N. Y., or E. J. Webb, agent, 114 Main St., Beacon, N. Y.

No. 361.—Farm of 96 acres; located  $2\frac{1}{2}$  miles from Chelsea P. O.; 1 mile

from railway station, on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches. Highways, good. Nearest city, Beacon, population 11,040,  $2\frac{1}{2}$  miles distant, reached by highway. General features, level and slightly rolling. Nature of soil, loam. Acres tillable, most all. Fruit, apples, variety. Best adapted to general crops. Fences, stone and wire, good condition. House, large, 24 rooms, fine condition. Outbuildings: good carriage house, stable, ice house, hennery, and large stock barns. Tenant house separated from residence by evergreen hedge;  $\frac{1}{2}$  mile to Hudson river. Occupied by tenant. Reason for selling, other business. Price, \$25,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address J. D. Campbell, owner, Chelsea, N. Y., or L. H. Whittemore, broker, 131 Main St., Beacon, N. Y.

No. 362.—Farm of 155 acres; located 1 mile from Brinckerhoff P. O., and railway station, on line of Central New England R. R.;  $\frac{1}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches; 1 mile from milk station, and  $2\frac{1}{2}$  miles from condensing plant. Highways, good. Nearest city, Beacon, population 11,040, 8 miles distant, reached by State road and rail. General surface, level and rolling. Nature of soil, black loam and gravelly. Acres tillable, 130. Fruit, 200 apple, 100 peach trees and other fruit for family use. Best adapted to general farming. Fences, wire and stone, good condition. House, 8 rooms, modern, hot-air furnace. Outbuildings: pig pen, large hay and cow barn, tool shed. House watered by well, barns by well, and fields by brook. Occupied by owner. Price, \$8,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address W. C. Van Voorhis, owner, Briarcliff, N. Y., or L. H. Whittemore, broker, 131 Main St., Beacon, N. Y.

No. 363.—Farm of 60 acres; located  $1\frac{1}{4}$  miles from Beacon P. O. and railway station on line of N. Y. C. R. R.; 1 mile from school;  $1\frac{1}{4}$  miles from churches. Population of Beacon 11,040, reached by State road. General surface, level. Nature of soil, black loam. Few acres in timber, oak and chestnut. Acres tillable, 45. Fruit, large vineyard, apple orchard, pears and cherries. Best adapted to general and truck farming. Fences, stone and wire, good. House, 12 rooms, good. Outbuildings, ample, good condition. House watered

by cistern; barns, by well; field, by springs. View of Hudson river. Price, \$10,000. Terms,  $\frac{1}{2}$  cash. Address C. Buffett, owner, Beacon, N. Y., or L. H. Whittemore, broker, 131 Main St., Beacon, N. Y.

No. 364.—Farm of 211 acres; located 1 mile from Fishkill P. O.; R. D. and railway station on line of Central New England R. R.; 1 mile from school and churches; 1 mile from milk station. Nearest city, Beacon, population 11,040, 6 miles distant, reached by rail or State road. General surface, level and slightly rolling. Nature of soil, limestone and gravelly loam. Acres in timber 57, oak. Acres tillable 160. Best adapted to general farming. Fences, stone and wire. House, 2 stories, 12 rooms, good condition. Outbuildings: barn, 50x50; barn, 42x30, wagon shed, ice house, corn crib, tenant house. House watered by well; barns, by springs, fields, by springs. Occupied by owner. Reason for selling, settling estate. Price, \$16,000. Terms, easy. Address F. Shaw, owner, Fishkill, N. Y., or L. H. Whittemore, broker, 131 Main st., Beacon, N. Y.

No. 365.—Farm of 55 acres; located  $\frac{1}{2}$  mile from Fishkill P. O. and railway station, on line of C. N. E. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches;  $4\frac{1}{2}$  miles from local market. Highways, State road. Nearest city, Beacon, population 11,040, 3 miles distant, reached by trolley and highway. General surface, level. Nature of soil, fine loam. Acres in natural pasture, 10. Acres tillable, 40. Fruit, 70 apple trees. Best adapted to general crops. Fences, wire in good condition. House, 16 rooms, in good condition. Large barn, 70x28; carriage house and corn crib. House watered by well, barns, by well and fields, by brook. Occupied by owner. Price, \$12,000. Terms, \$6,000 cash, balance on mortgage. Address C. D. Rogers, owner, Fishkill, N. Y., or L. H. Whittemore, broker, 131 Main street, Beacon, N. Y.

No. 366.—Farm of 108 acres; located 1 mile from Fishkill P. O. and railway station; on line of C. N. E. R. R.; 1 mile from school; 1 mile from churches. Highways, State road. Nearest city, Beacon, population, 11,040, 4 miles distant. Reached by trolley and State road. General surface, rolling. Altitude, 200 feet. Nature of soil, lime stone. Acres that can be used as



**FIG. 283.— HOUSE ON FARM 370, TOWN OF HYDE PARK, DUTCHESS COUNTY.**



**FIG. 284.— HOUSE ON FARM No. 372, TOWN OF LAGRANGE, DUTCHESS COUNTY.**



meadow, 40; in natural pasture, 20; in timber, 25, oak and chestnut. Acres tillable, 80. Fruit, apples, pears, plums and cherries. Best adapted to general crops. Fences, stone, good condition. House, 1½ stories, 7 rooms, fine fire places. Outbuildings, barn with 22 stanchions, new barn with concrete floor, stable and hay barn, corn crib, silo, wagon house, wind mill, water at each stanchion. House and barns watered by well, fields by pond. Reason for selling to settle an estate. Price, \$12,000. Terms, ½ cash, balance on mortgage. Address H. Avis, owner, Fishkill, N. Y., or L. H. Whittemore, broker, 131 Main street, Beacon, N. Y.

No. 367.—Farm of 22 acres, located 1 mile from Fishkill P. O., R. D. and railway station; on line of Central New England R. R.; 1 mile from school and churches. Milk sold to local dealers. Nearest city, Beacon, population, 11,040, 4 miles distant; reached by rail or State road. General surface, rolling. Nature of soil, limestone. Acres in meadow, 5; in pasture, 5; in timber, 5, oak. Acres tillable, 17. Fruit, apples, pears, plums and grapes. Best adapted to general farming. Fences, wire and stone, good condition. House, 12 rooms, modern conveniences, electric lights, fine condition. Outbuildings, ample and modern. House watered by well and cistern; barns by well; fields by springs. Occupied by owner. Price, \$15,000. Terms, ½ cash. Address Mrs. E. Storm, owner, Fishkill, N. Y., or L. H. Whittemore, broker, 131 Main St., Beacon, N. Y.

## TOWN OF HYDE PARK

Population 3,019

No. 368.—Farm of 215 acres; located 2 miles from Staatsburg P. O. and railway station, on line of N. Y. C. & H. R. R. R.; 1½ miles from school; 2 miles from churches, milk station and milk condensing plant. Highways, good State road. Surface of farm, rolling and level. Soil, sandy loam and clay loam. Acres in meadow, 35; in natural pasture, 25; in timber, 80, pine, chestnut, oak and hickory. Acres tillable, 75. Fruit, 75 apple trees, also cherries, pears and plums. Best adapted to corn, wheat, rye and oats. Fences, stone wall, post and wire. House, 28x38 with addition, 8 rooms, good condition. Outbuildings, hay and stock barn, 38x50; carriage house with basement, 32x28; ice house, creamery attached; sheep barn, 38x20;

tenant house, 4 rooms, all in good condition. Watered by cistern, well, springs and running streams. Hudson river forms the west boundary of this property. Occupied by tenant. Reason for selling, advanced age and ill health of owner. Price, \$20,000. Terms, \$12,000 cash, balance of purchase price on bond and mortgage at 5%. Address Geo. W. Rymph, owner, Hyde Park-on-the-Hudson, N. Y., Box 167.

No. 369.—Farm of 160 acres, located 3½ miles from Staatsburgh P. O. and railway station, on line of N. Y. C. R. R.; ¼ mile from school; 1 mile from churches; 6 miles from butter factory and 3½ miles from milk station. Highways, level, good road. Nearest city Poughkeepsie, population 27,936, 10 miles distant; reached by rail and highway. General surface, part hilly and level. Altitude 300 feet. Nature of soil, mostly slate loam, some gravel. Acres that can be used as meadow, 100; in natural pasture, 20; in timber, 40. Acres tillable, 100. Fruit, 200 trees, set 2 years, a young apple orchard. Best adapted to general farm crops and fruit. Fences, stone and wire, fair condition. House, 2-story, 12 rooms, modern improvements. Farm house of 6 rooms. Outbuildings, basement barn, 30x86, hay and cattle barn, 20x40; shed, 18x50; grain house, 18x25; hog house, ice house and poultry houses. House watered by well and cistern, barns, by running spring water, fields, by springs. ½ mile from lake. Occupied by owner. Reason for selling, other business. Price, \$8,000. Terms, \$3,000 cash, balance on mortgage. Address Dr. H. Reed Hawley, owner, Staatsburgh, N. Y., or Charles E. Rogers, broker, 35 Market St., Poughkeepsie, N. Y.

No. 370.—Farm of 95 acres, located 3½ miles from Poughkeepsie P. O., R. D. 1 and railway station on line of N. Y. C. R. R.; ¾ mile from school; 3½ miles from churches; 3 miles from milk station. Highways, good, some State road. General surface of farm, rolling. Nature of soil, loam. Acres in meadow, 12; in pasture, 10; in timber, 8, oak, elm and chestnut; acres tillable, 65. Fruit, 20 apple trees, small fruit for home use. Fences, stone, in good condition. House, main part 30x40, 2 stories, addition 18x24, 1½ stories, 11 rooms. Outbuildings: wagon house, 39x40, new; old wagon house, 24x20; barn No. 1, 33x45, barn No. 2, 45x18; poultry house,

20x39; wood house, 18x18 and corn crib, 3 green houses, each 120 feet long, all in good condition. House watered by well and cistern. Barns, by windmill and creek; fields, by springs and brooks. Occupied by tenant for the first year. Reason for selling, to settle estate. Price, \$14,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Mrs. K. C. Todd, owner, R. D., Poughkeepsie, N. Y.

No. 371.—Farm of 140 acres, located near Pleasant Valley P. O. and railway station on line of Central New England R. R.; 1 mile from school and churches. Highway, State road. General surface of farm, level and hilly. Nature of soil, loam. Acres in pasture, 10; in timber, 15, oak, chestnut and locust. Acres tillable, 115. Fruit, 100 apple trees about 10 years old. Fences, stone and wire. House, 11 rooms, bath, etc. Good cow barn. House watered by artesian well, barns piped from well, fields watered by stream. Occupied by owner. Reason for selling, wishes to retire. Price, \$12,000. Address J. W. Sutcliff, owner, 1812 Arthur ave., New York City, or E. J. Webb, agent, 114 Main street, Beacon, N. Y.

#### TOWN OF LAGRANGE

Population 1,350

No. 372.—Farm of 302 acres, located 2 miles from LaGrangeville P. O., R. D. 15; 1 mile from railway station at Arthursburg, on line of Central New England Railway; 1 mile from school; 2 miles from Methodist and Presbyterian churches; 4 miles from butter factory. Highways in fine condition. Nearest city, Poughkeepsie, population 27,936, distance 10 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 400 feet. Nature of soil, loam. Acres in meadow, 50; in pasture, 10; in timber, 15, chestnut, oak, hickory and maple. Acres tillable, 225. Fruit, apples, peaches, pears, plums and cherries. Best adapted to general farm crops. Stone fences, in good condition. House,  $1\frac{1}{2}$  stories, 14 rooms, in good condition. Outbuildings: wagon house 24x26; horse and cattle barn 24x75; grain and hay barn 30x54; stables for 32 cows and 4 horses; poultry house 15x18; hog, wood and ice houses; tenant house; barn 30x50; 4 other buildings in good condition. House watered by wells and cistern, fields by springs and creek. Sylvan Lake 3 miles distant; Fishkill range in sight, also Catskill mountains. Occupied by owner.

Reason for selling, old age. Price, \$15,000. Terms  $\frac{1}{2}$  cash, balance on mortgage. Address Phebe Wright, owner, La Grangeville, N. Y.

No. 373.—Farm of 180 acres; located 2 miles from Pleasant Valley P. O., R. D. 60 and railway station on line of Central New England R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches, Presbyterian, Methodist and Catholic; 4 miles from butter factory; 2 miles from milk station. Highways, hilly, in good condition. Nearest city, Poughkeepsie, population 27,936, distance 7 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 500 feet. Nature of soil, loam. Acres in meadow, 10; in pasture, 15; in timber, 15, oak, chestnut, hickory and maple. Acres tillable, 140. About 150 apple trees, also other fruit. Best adapted to dairying and fruit growing. Fences, chiefly stone, in good condition. House, 2 stories, 8 rooms, very good condition. Outbuildings: carriage house and stable 24x40; barn 30x40; cattle barn 40x50; stables in good condition. Watered; house by well and cistern; barns, by springs; fields, by several springs. Hudson river, 7 miles distant. Several small lakes, 2 miles distant. Occupied by tenant. Reason for selling, poor health. Price, \$6,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address W. H. Sheldon, owner, Salt Point, N. Y., or C. E. Rogers, agent, 35 Market street, Poughkeepsie, N. Y.

No. 374.—Farm of 124 acres; located 3 miles from Billings P. O. and railway station on line of N. D. & C. R. R.; 1 mile from school and churches; 3 miles from butter factory and milk station. Nearest city Poughkeepsie, population 27,936, reached by rail or highway, 7 miles distant. General surface, rolling. Altitude 400 feet. Nature of soil, Dutchess silt loam. Acres in meadow 100; in pasture 12; in timber 6, chestnut and oak. Acres tillable 100. Fruit, 150 apple trees, 25-year growth, standard varieties. Best adapted to general farm crops and fruit. Fences, mostly stone, well fenced. House, 8 rooms, 2 stories, extension 16x30. Outbuildings: wagon house, 27x28; poultry house, 12x30; hog house, 12x21; ice house; cattle barn, 36x60; silo, hay and grain barn, 28x60; stanchions for 30 cows; 4 horse stalls. Spring water pumped in house; barns watered by running water; fields, by wells and springs. Occupied by owner.



FIG. 285.—VIEW OF FARM NO. 376, TOWN OF LA GRANGE,  
DUTCHESS COUNTY.



FIG. 286.—BARN ON FARM NO. 376, TOWN OF LA GRANGE, DUTCHESS  
COUNTY.





Reason for selling, advanced age. Price, \$7,500. Terms, \$3,000 cash, balance on mortgage. Address W. H. S. Miner, owner, Slingerlands, N. Y., or Charles E. Rogers, broker, 35 Market St., Poughkeepsie, N. Y.

No. 375.—Farm of 125 acres; located  $\frac{1}{8}$  mile from Billings P. O. and railway station, on line of C. N. E. R. R.;  $\frac{1}{8}$  mile from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{2}$  mile from butter factory;  $\frac{1}{2}$  mile from milk station and condensing plant. Highways, State road. Nearest city, Poughkeepsie, population 27,936, 9 miles distant, reached by rail or highway. General surface slightly rolling. Altitude 300 feet. Nature of soil, loam. Acres in meadow, 30; in natural pasture, 20; in timber, 17. Acres tillable, 100. Fruit, 114 trees, 20 years old, 325 apple trees, 2 years old and 200 peach trees. Best adapted to corn, oats, fruit and alfalfa. Fences, stone. House, 12 rooms, in excellent condition. New tendition. Fields watered by springs. Occupied by owner. Price, \$8,500. Terms, \$2,000 cash, balance on mortgage. Address Fred Jones, owner, 301 W. 109th St., New York City, or J. P. Christensen, broker, 320 Fifth Ave., New York City.

No. 376.—Farm of 263 acres; located  $1\frac{1}{2}$  miles from Moores Mills P. O., and railway station on line of C. N. E. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory, milk station and condensing plant. Highways, State road. Nearest city, Poughkeepsie, population 27,936, 8 miles distant, reached by highway. Altitude 450 feet. Nature of soil, Dutchess loam. Acres in timber, 10; acres tillable, 253. Fruit for home use. Best adapted to corn, oats and alfalfa. Fences in good condition. House, 15 rooms, in fine condition. Outbuildings: cattle barn, 32x75, stanchions for 50 cows, room for 75 tons of hay. House and barn watered by springs; fields, by springs and stream. A stream for power with a 20 ft. channel flows through 70 acres of pasture. Occupied by tenant. Possession can be given in 90 days. Reason for selling, advanced age of owner. Price, \$15,000. Terms, 60% purchase price will be taken on mortgage. Address Edward Smith, owner, Poughkeepsie, N. Y., or J. P. Hoegsbro Christensen, broker, 320 Fifth Ave., New York City.

## TOWN OF MILAN

Population 893

No. 377.—Farm of 109 acres; located 1 mile from Jackson Corners P. O. and railway station on line of C. N. E. Ry.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 1 mile from milk station. Highways, in good condition. Nearest village, Red Hook, population 960, distant 5 miles, reached by rail and highway. General surface of farm, level. Fertile soil. Acres in meadow, 2; in pasture, 5; in timber, 12, oak and chestnut; tillable, 80. All kinds of fruit. Best adapted to general farming. Fences, rail and wire. House, 7 rooms. Outbuildings, in good condition. House, barns, and fields, watered by well and springs. Reason for selling, to settle estate. Price, \$2,000. Terms on application. Address H. G. Chapman, owner, Bennington, Vt., or Wm. Harry Montgomery, agent, Red Hook, N. Y.

## TOWN OF NORTHEAST

Population 2,110

No. 378.—Farm of 180 acres; located  $1\frac{1}{4}$  miles from Boston Corner P. O., R. D. 34, from Millerton;  $1\frac{1}{2}$  miles from railway station at Boston Corner, on line of N. Y. & Harlem and C. N. E. R. R.;  $\frac{3}{4}$  mile from school;  $1\frac{1}{4}$  miles from milk station. Highways, good. Nearest large village, Millerton, population 858, 6 miles distant, reached by rail and highway. Soil, lime soil and gravel loam, high state of cultivation. Acres in meadow, 80; in natural pasture, 60; in timber, 40, chestnut, oak and maple; acres tillable, 140. Fruit, apples, pears, cherries and plums. Best adapted to corn, grass and all kinds of grain. Fences, mostly wire, some wall and rail, good condition. House, 24x40, piazza whole length,  $2\frac{1}{2}$  stories, 12 rooms. Outbuildings, barn, 32x66; horse and carriage barn, 30x66, with ell, 12x24; sheds, tenant house and barn. Watered by well, cistern, springs and brook. Occupied by owner and tenant. This farm keeps dairy of 20 to 25; cuts 60 to 75 tons of hay. About 100 miles from New York City. This farm occupies a very desirable location. The house is well shaded by maple and chestnut trees and is situated on high ground overlooking the Harlem valley. Barns are painted and modern; dairy improvements. A very desirable investment. Reason for sell-

ing, advanced age of owner. Price, \$12,500. Address Chas. E. Lloyd, owner, Millerton, N. Y., R. D. 34.

#### TOWN OF PINE PLAINS

Population 1,420

No. 379.—Farm of 360 acres; located 1 mile from Mt. Ross P. O.; R. D. 37 from Pine Plains; on line of C. N. E. R. R.; 1 mile from station; 1 mile from school; 2 miles from Reformed church. Highways, good. Nearest village, Pine Plains, population 600, 3 miles distant, reached by highway. Occupied by owner. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 150; in natural pasture, 150; in timber, 60, oak, hickory and chestnut; acres tillable, 250. Fruit, 200 apple trees, pears and cherries. Best adapted to hay, grain, potatoes and fruit. Fences, stone wall, rail and wire. House 12 rooms, in fine condition. Main barn, 40x60; wagon house, 50x30; storage barns, new silo and wagon house. Watered, house and barn by running spring water, fields by springs and streams. A good dairy and chicken farm. Reason for selling, owner a widow. Price, \$11,000. Terms, \$6,000 cash, balance on mortgage. Address Mrs. Emily Hinsdale, owner, Pine Plains, N. Y., or John P. Fulton, agent, Red Hook, N. Y.

No. 380.—Farm of 585 acres; located 1 mile from Pine Plains P. O.; ¼ mile from railway station at Briar Cliff on line of C. N. E. R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory; ¼ mile from milk station. General surface of farm, level. Altitude, 300 feet. Acres can be used as meadow, 486; in timber, 100, pine and hardwood. Acres tillable, 486. Fruit, apples, pears and cherries. Best adapted to general farming. Fences, wire, fine condition. House, 40x30 with extensions, 15 rooms; 3 tenant houses, fair size, 2 stories; 4 large barns. Houses and barns watered by springs. Lake Stissing on property. Property runs to top of Mt. Stissing. Occupied by tenant. Reason for selling, to settle estate. Price and terms on application. Heirs of Charles C. More estate, care Frederick R. Keator, attorney, 22 Exchange place, New York City.

No. 381.—Farm of 133½ acres; located 3½ miles from Stissing P. O. and railway station on line of N. D. & C.

R. R.; 1 mile from school and churches; 5 miles from milk station. Nature of highways, good but hilly. Altitude, 600 feet. Nature of soil, rough, stony land. Acres in meadow, 10; in pasture, 40; in timber, 15, chestnut, oak and hickory. Acres tillable, 60. Fruit, good orchard, various kinds. Fences, mostly wire. House 1½ stories, 24x60, frame, 14 rooms. Outbuildings, wagon house and granary, 24x24; grain barn, 28x40; cattle and sheep barn, 20x30; wagon house and garage, 20x28; 2 wood houses, 2 hog houses, 2 poultry houses, smoke house, tool house. Spring water piped into kitchen and stock yards. ½ mile from several ponds and small lakes. Occupied by owner. Reason for selling, owner has other property. Price, \$3,000. Address A. S. Robinson, owner, Poughkeepsie, N. Y., or Charles E. Rogers, broker, 35 Market street, Poughkeepsie, N. Y.

#### TOWN OF PLEASANT VALLEY

Population 1,358

No. 382.—Farm of 97 acres; situated near C. N. E. R. R.; R. D. from Pleasant Valley. Highways, good. Soil, good flat land. Acres of meadow, nearly all tillable. Fruit, large, young apple orchard. Best adapted to hay, oats, barley, potatoes, corn, buckwheat, etc. Occupied by owner. Fences, stone, and in good condition. Large house, comparatively new. Barns large and good; running water. Watered, house by well and cistern, fields, by small stream. It is said that the buildings on this farm could not be replaced for \$12,000. Reason for selling, advanced age of owner. Price, about \$14,000. Terms on application. Name and address of owner, Ralph Bartholomew, Pleasant Valley, N. Y., R. D.

No. 393.—Farm of 54 acres; located 2 miles from Salt Point P. O. and railway station, on line of C. N. E. R. R.; 1 mile from school; ½ mile from church; 2 miles from butter factory and milk station. Highways, good gravel roads, not very hilly. Nearest city, Poughkeepsie, population 27,936, 8 miles distant, reached by rail or highway. General surface rolling. Altitude, 500 feet. Nature of soil, Dutchess stony loam. Acres in timber, 6, oak and chestnut. Acres tillable, 45. Fruit, good apple orchard of 3 acres. Best adapted to hay, corn, oats and



FIG. 287.—HOUSE ON FARM NO. 376, TOWN OF LA GRANGE, DUTCHESS COUNTY.



FIG. 288.—HOUSE ON FARM NO. 381, TOWN OF PINE PLAINS, DUTCHESS COUNTY.



fruit. Fences, stone and wire, good condition. House, frame, 9 rooms, hot air heater, good condition. Outbuildings, barn, carriage house, poultry house, laying house, 20x132, brooder house, incubator house, 20x150. House watered by well, barns by well and fields by springs. Hudson river, 5 miles distant. Occupied by owner. Price, \$10,500. Terms, reasonable. Price includes two 6,000 egg incubators, about 1,500 hens and pullets, 2 horses, 2 cows, all wagons, harness and implements. Address Millard Van Wagner, owner, Salt Point, N. Y., or Edward C. Dayton, broker, Poughkeepsie N. Y.

No. 384.—Farm of 83 acres; located  $1\frac{3}{4}$  miles from Salt Point P. O., R. D. 54; 2 miles from railway station at Salt Point, on line of C. N. E. R. R.; 1 mile from school and churches; 2 miles from butter factory and milk station. Highways, good. Nearest city, Poughkeepsie, population 27,936, distant 9 miles, reached by rail and highway. Surface, level and rolling. Altitude, about 400 feet. Soil, Dutchess silt loam. Acres in natural pasture, 5; in timber,  $\frac{1}{4}$ ; acres tillable, 80. Fruit, cherries, pears, apples. Best adapted to general farming and poultry. Fences, stone and wire, good condition. House, 14 rooms, large, excellent condition. Outbuildings, new barn, 28x32; granary; carriage house, 16x24; hen house and woodshed, 11x40; hen houses 20x60 and 20x100; six colony houses, 8x10. Watered, house by cistern and well, barns and fields, by springs. This farm will keep 15 cows. Occupied by owner. Price, \$6,500. Terms, \$3,000 cash, balance can remain on mortgage at 5% interest. Address August L. Warnken, owner, Salt Point, N. Y., Box 54.

## TOWN OF POUGHKEEPSIE

Population 8,628

No. 385.—Farm of 105 acres; located 3 miles from Poughkeepsie P. O., R. D. 3 and railway station on line of N. Y. C. and Central New England Rys.; 1 mile from school; 3 miles from churches of all denominations; 2 miles from milk station. Highways, level, in good condition. Nearest city, Poughkeepsie, population 27,936, reached by highway. General surface of farm, rolling. Altitude, 300 feet. Nature of soil, loam. Acres in pasture, 12; in timber, 3, hickory and oak; acres tillable, 90. Fruit,

170 apple, 50 peach, 50 plum, cherry and pear trees and berries. Best adapted to corn, oats, wheat, hay and fruit. Fences, mostly stone, in good condition. House 42x50, 14 rooms, slate roof, bath, toilet, all in good condition. Outbuildings, carriage house, 30x45; horse stable, 20x45; cattle barn, 30x50, stanchions for 20 cattle. Watered: house, by well; barns, by spring and well; fields, by springs and brooks. Hudson river, 3 miles distant, Morgan lake, 1 mile distant. Price, \$10,000. Terms, \$5,000 cash, balance on mortgage. Address John E. Townsend, owner, 15 Innes avenue, Poughkeepsie, N. Y.

## TOWN OF RED HOOK

Population 3,705

No. 386.—Farm of 145 acres; 100 rods from Spring Lake station;  $1\frac{1}{2}$  miles from upper Red Hook P. O. Good road. Soil, loam, muck and gravel, very rich. 100 acres meadow; natural pasture, 25; timber, 20. Large house, in fine condition, suitable for boarders. Soil adapted to gardening, dairying and grain. Barns, large and good, with stable room for 25 cows. Fruit, pear orchard and 400 apple trees. Watered by springs and lake adjoining farm. This is a fine farm for raising poultry. Price, \$13,000. Terms, to suit the purchaser. Name and address of owner, Milton Best, Red Hook, N. Y.

No. 387.—Farm of 108 acres; 1 mile from post office; 1 mile from 3 churches;  $\frac{1}{2}$  mile from the Baker Chocolate factory creamery and high school. First-class frame house. Barn, 40x52, with basement. Good outbuildings. Two violet houses, one 155 feet long, just built at a cost of \$1,800. Ready market found for all that can be raised on the farm and in the conservatory. Fruit, apple and pear trees. Would be a good place to breed and train horses, as there is a new half-mile track a quarter mile from the house, and entrance to track is only across the State road from entrance to farm. Reason for selling, owner cannot stand hard work and is obliged to change his occupation. Price and terms confidential. Address Julius Moul, owner, Red Hook, N. Y. Owner will rent with option to buy.

No. 388.—Farm of 250 acres; located  $2\frac{1}{2}$  miles from Red Hook P. O. and railway station on line of Central New

England Railway.  $2\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from churches of all denominations;  $2\frac{1}{2}$  miles from milk station. Highway in excellent condition. Nearest village, Red Hook, population 960, distance  $2\frac{1}{2}$  miles, reached by highway. General surface of highway, level and rolling. Nature of soil, loam. Acres in timber, 40, oak, hickory and chestnut; acres tillable, 200. Fruit, 1,300 apple and 200 pear trees; also cherries, plums and quinces. Best adapted to all farm crops. Fences, wood and wire, in good condition. House, 32x44, with ell 24x30, 12 rooms in fine condition. Outbuildings: 3 good barns, 45x66, 24x68, 24x26. One has 30 cattle stanchions and 2 box stalls; one with basement. Watered: house, by wells; barns, by wells; fields, by brook and springs. Spring Lake, 2 miles distant, Hudson river, 3 miles distant. Occupied by owner. Reason for selling, old age. Price, \$20,000. Terms, part may remain on mortgage if desired. Address Phillip H. Stickle, owner, R. D. Red Hook, N. Y., or Wm. Harry Montgomery, agent, Red Hook, N. Y.

No. 389.—Farm of 127 acres; located 2 miles from Red Hook P. O. and railway station on line of Central New England Railway; 2 miles from school; 2 miles from churches of all denominations; 2 miles from milk station. Highways, in good condition. Nearest village, Red Hook, population 960, distance 2 miles, reached by highway. General surface of farm, level and rolling. Nature of soil, sand and slate loam. Fruit, 550 apple trees. Adapted to all farm crops. Fences, wood and wire, in good condition. House,  $2\frac{1}{2}$  stories, 8 rooms, in good repair. Outbuildings: 1 barn, two wagon houses and one shed. House, barns and fields watered by wells and springs. Hudson river, 5 miles distant, Spring Lake 3 miles distant. Occupied by owner. Reason for selling, old age. Price, \$8,500. Terms to suit purchaser. Address Jacob Phillips, owner, R. D. Red Hook, N. Y., or Wm. Harry Montgomery, agent, Red Hook, N. Y.

No. 390.—Farm of 108 acres; located 2 miles from Red Hook P. O. and railway station on line of C. N. E. Ry.; 2 miles from school; 2 miles from churches of all denominations; 2 miles from milk station. Highways, in good condition. Nearest village, Red Hook, population 960, distance 2 miles, reached by highway. Nature of soil, sand and loam.

Acres in timber, 2, oak and chestnut; acres tillable, 100. Fruit, 300 apple trees; also pears, plums, peaches and cherries. Best adapted to general farming. Fences, wood and wire, in fine condition. House, 2 stories, 7 rooms, in good condition. Outbuildings, main barn 35x40; wagon house, 24x36; hay barn, 20x40, contains hay press; hog, sheep and chicken houses. House, barns and fields watered by wells and springs. Hudson river, 5 miles distant, Spring Lake, 3 miles distant. Occupied by owner. Price, \$5,300. Terms, \$3,300 cash, balance on mortgage. Address Benjamin C. Cotting, owner, R. D. Red Hook, N. Y., or Wm. Harry Montgomery, agent, Red Hook, N. Y.

No. 391.—Farm of 110 acres; located 1 mile from Upper Red Hook P. O., R. D. 44;  $\frac{1}{2}$  mile from railway station at Upper Red Hook, on line of C. N. E. Ry.; 1 mile from school and church. Highways, good. Occupied by owner. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 10; in natural pasture, 100. Acres tillable, 15. Fruit, 400 apple trees and 50 pear trees. Best adapted to grain, fruit and hay. Fences, stone wall and wire, good condition. House, 38x28, with addition 16x28, good condition. Outbuildings, barn, 52x40, shed adjoining, 21x32, basement under all, new. Watered, house, by well and cistern; barn, by wells; fields, by springs. Spring Lake is  $\frac{1}{2}$  mile from farm. Price, \$11,000. Terms, cash. Reason for selling, advanced age of owner. Address T. F. Nelson, owner, Red Hook, N. Y., or John P. Fulton, agent, Red Hook, N. Y.

#### TOWN OF RHINEBECK

Population 3,532

No. 392.—Farm of 138 acres; located  $\frac{1}{4}$  mile from Rhinebeck P. O.;  $1\frac{1}{2}$  miles from Rhinecliff railway station, on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school and churches; 6 miles from milk station. Highways, good. Surface, mostly level. Soil, loam. Acres in meadow, all; acres tillable, all. Fruit, 300 apple trees, some pears and cherries. Best adapted to hay, corn, wheat, potatoes and rye. Fences, wire, fair. House, 40x80, good. Outbuildings: barn, 150x35; carriagehouse, 40x60; stable, 40x20; 3 greenhouses for violets. Income from violets, \$5,000. Watered by village water, spring and creek. This property is  $1\frac{1}{2}$  miles from Hudson river, good view



**FIG. 289.—VIEW ON FARM No. 383, TOWN OF PLEASANT VALLEY,  
DUTCHESS COUNTY.**



**FIG. 290.—POULTRY HOUSE ON FARM No. 383, TOWN OF PLEASANT  
VALLEY, DUTCHESS COUNTY.**





of Catskill mountains. This would make an ideal place for large summer hotel, school or sanitarium, as it is high and gets the breezes from the Catskills. The village needs a good hotel for summer boarders. Occupied by owner. Price, \$30,000. Terms,  $\frac{1}{2}$  cash, remainder on mortgage. Address Francis Curnan, owner, Rhinebeck, N. Y.

No. 393.— Farm of 185 acres; located 2 miles from Rhinebeck P. O., R. D. No. 50; 4 miles from railway station at Rhinecliff, on line of N. Y. C. & H. R. R.; 1 mile from school, Catholic and Protestant churches; 2 miles from milk station and milk condensing plant. Highway in good condition. Nearest city, Poughkeepsie, population 27,936, 15 miles distant, reached by rail and highway. Surface of farm, rolling and level. Altitude, 300 feet. Soil, clay loam. Acres in meadow, 30; in natural pasture, 105; in timber, 50, oak, maple, hickory and elm. Acres tillable, 135. Fruit, 350 apple, 20 pear, 12 plum and 15 peach trees. Best adapted to corn, oats, rye and hay. Fences, wire and stone wall, good condition. House, large, 2 stories, 20 rooms, good condition. Outbuildings, large barn, sheds, 2 hen houses, carriage house, all in good condition. Watered, house, by well; barns, by well and creek; fields, by creeks and springs. Occupied by owner. Reason for selling, ill health of owner. Price, \$9,000. Terms, two-thirds cash. Address Clarence Crapser, owner, Rhinebeck, N. Y.

No. 394.— Farm of 160 acres; located 3 miles from Rhinebeck P. O. and 5 miles from railway station at Rhinecliff on the N. Y. C. R. R.; 1 mile from school and 2 miles from churches; 2 miles from milk station. Highways, State road. General surface, rolling. Nature of soil, silt loam. Acres in meadow, 10; in pasture, 20; in timber, 15; acres tillable, 125. Fruit, 625 apple trees. Best adapted to alfalfa, corn and fruit. Fences, in good condition. House of 14 rooms and tenant house of 4 rooms. Outbuildings, large barn for 30 cows and wagon house. House watered by well; barns and fields, by springs. Catskill mountains and Hudson river, near farm. Occupied by owner. Reason for selling, wishes to retire. Price, \$10,000. Terms, half cash. Address Mrs. C. Burger, owner, Rhinebeck, N. Y., or J. P. Christenson, agent, 320 Fifth Ave., New York City.

No. 395.— Farm of 125 acres; located 2 miles from Rhinebeck P. O., R. D. No. 49, and railway station on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches. Milk collected at door. Highways, State road. General surface, hilly, rolling and level. Altitude, 600 feet. Nature of soil, loam and muck. Acres can be used as meadow, 100, in timber, 10, maple, chestnut, oak and hemlock. Acres tillable, 100. Fruit, 100 Baldwins, 80 Newtons, 15 Northern Spies, 30 other varieties of apples; 20 cherries, 80 pear trees, small fruit. Best adapted to grain and hay. Fences, stone wall with top rail, good condition. House, 10 rooms, with modern improvements. Outbuildings: barn 40x40; carriage house and stables 30x40; cattle barn 30x75; with concrete floor; poultry house; granary and hog house. All painted and in good condition. House and barn watered by city water, fields, by springs and stream. Occupied by caretaker, possession given at any time. Reason for selling, owner in other business. Price, \$15,000. Terms, one-half cash, balance on mortgage at 6%. Free unlimited water rights belong to place. Address, S. W. Vanderbeck, owner, Manhasset, Nassau Co., L. I., N. Y.

No. 396.— Farm of 150 acres; located 3 miles from Rhinebeck P. O., R. D. 49, and railway station on line of N. Y. C. R. R.;  $1\frac{1}{4}$  miles from school and churches; 3 miles from butter factory; 5 miles from milk station. Acres can be used as meadow, 140; in timber, 6, oak, chestnut and ash. Acres tillable, 144. Fruit, 500 apple trees; 50 peaches, pears and other fruit. House, 13 rooms, with wing. Outbuildings: barn, 44x50; shed, 32x22; horse barn, 36x26; hay barn, 36x24; corn house, 26x18. House and barns watered by wells, fields, by springs. Occupied by owner. Reason for selling, old age. Price, \$9,000. Terms, \$5,000 cash, balance on mortgage. This farm also has violet house, 150x20 feet, and silo which holds 120 tons. Address Mrs. F. A. Burger, owner, Rhinebeck, N. Y.

#### TOWN OF UNION VALE

Population 1,097

No. 397.— Farm of 150 acres; located 2 miles from Moores Mills P. O., R. D. 25;  $2\frac{1}{2}$  miles from Verbank railway station on line of Central New England R. R.; 2 miles from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from butter

factory and milk station. Highway, hilly. General surface, level and rolling. Acres in meadow, 79; in pasture, 60; in timber, 10. Acres tillable, 100. Fruit, apples, variety. Best adapted to hay, corn and potatoes. Fences, wire and stonewall, fair condition. House, new. Large new barn, silo and ice house. House and barn watered by ram; fields, by springs. Occupied by tenant. Reason for selling, in other business. Price, \$9,000. Address James Mateer, owner, Verbank, N. Y.

No. 398.—Farm of 160 acres; located 1 mile from Moores Mills P. O., and railway station on line of C. N. E. R. R., 1 mile from school; 3 miles from churches; 2 miles from milk station. Highways, good, little hilly. Nearest city, Poughkeepsie, population 27,936, 11 miles distant, reached by rail or highway. General surface, level and slightly rolling. Altitude, 700 feet. Nature of soil, Dutchess silt loam. Acres in meadow, 100; in pasture, 40; in timber, 8, oak and chestnut. Acres tillable, 140. Fruit, 100 apple trees, mostly Baldwins and Greenings, peaches, pears and plums. Best adapted to hay, oats, corn and rye. Fences, rail, wire and stone, in good condition. House, frame, 10 rooms, 36x42, 5 years old, chestnut trim throughout. Outbuildings: barn, six years old, 32x60, cow stable for 26 head, concrete floors, silo, carriage house, ice house. House watered by well and cistern; barns, by spring water; fields, by spring and pond. Occupied by tenant. Reason for selling, owner in other business. Price, \$9,000. Terms, \$4,000 cash, balance on mortgage. Address James Mateer, owner, Verbank, N. Y., or Edward C. Dayton, broker, Poughkeepsie, N. Y.

No. 399.—Farm of 126 acres; located 4 miles from Wingdale P. O., R. D. 21, and railway station on line of Harlem division of N. Y. C. Ry.; 1 mile from school; 3 miles from churches of all denominations; 4 miles from milk station. Highway, hilly. Nearest village, Dover Plains, population 600, distance 5 miles, reached by highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, loam. Acres in meadow, 20; in pasture, 10; in timber, 10, chestnut, oak, hickory and maple; acres tillable, 86. Fruit, 75 apple, 20 peach, 10 plum and 6 cherry trees. Best adapted to corn, oats, hay and fruit. Fences, stone, in good condition. House, 40x45, 2 stories, 12 rooms, in fair condition. Outbuildings: barn, 30x40; wagon house

and horse stable, 24x40, in fair condition. Watered, house by spring; barns, by springs; fields, by springs. River, 4 miles distant. Occupied by owner. Reason for selling, owner desires to retire. Price, \$2,500. Terms, \$1,250 cash, \$1,250 mortgage. Address Frank Dennis, owner, Wingdale, N. Y., or J. Sterling Drake, agent, 29 Broadway, New York City.

No. 400.—Farm of 203 acres; located 1 mile from Verbank P. O., and railway station on line of Newburgh, Dutchess and Connecticut R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 2 miles from milk station. Nearest city, Poughkeepsie, population 27,936, 13 miles distant, reached by rail or highway. General surface, rolling. Altitude, 500 feet. Nature of soil, Dutchess silt and slate loam. Acres in meadow, 100; in pasture, 35; in timber, 25, oak, chestnut, maple. Fruit, apple orchard of 40 trees in full bearing; 100 trees planted 10 years, variety of other fruit. Best adapted to general farm crops and dairying. Fences, stone and wire, good condition. House, 2 stories, 10 rooms. Outbuildings: main barn, 28x50; cattle barn, 60x20; open shed, 20x30; 110 ton silo. House watered by pump in house from well in yard; barns and fields, by springs and brooks. Occupied by owner. Reason for selling, ill health. Price, \$11,000. Terms, \$5,000 cash, balance on mortgage. Address Charles Husted, owner, Verbank, N. Y., or Charles E. Rogers, broker, 35 Market st., Poughkeepsie, N. Y.

#### TOWN OF WAPPINGER

Population 3,813

No. 401.—Farm of 240 acres; located 2 miles from Fishkill P. O. and railway station at Fishkill on line of C. N. E. Ry.; 2 miles from school and churches of all denominations. Highways, in good condition. Nearest city, Beacon, population 11,040, distant 7 miles, reached by rail and highway. General surface of farm, rolling. Nature of soil, good. Acres in timber, 100; tillable, 140. Fruit, pears, cherries, plums and apples. Best adapted to corn, wheat and rye. House, 2 stories, cellar and attic with acetylene gas plant. Outbuildings: poultry house, carriage house, horse barn, large hay barn, cow barn, pig pen and wood house. House watered by well; barns, by well; fields, by stream. Occupied by owner. Price, \$16,000. Cows, chickens, pigs, horses, ducks, growing crops, wagons, farm tools, etc., in-



**FIG. 291.—HOUSE ON FARM NO. 398, TOWN OF UNION VALE, DUTCHESS COUNTY.**



**FIG. 292.—BUILDINGS ON FARM NO. 398, TOWN OF UNION VALE, DUTCHESS COUNTY.**





cluded in price. Address J. B. Cooper, owner, R. D., Fishkill, N. Y., or E. J. Webb, agent, 114 Main St., Beacon, N. Y.

No. 402.— Farm of 205 acres; located  $2\frac{1}{2}$  miles from Wappingers Falls P. O.;  $4\frac{1}{2}$  miles from railway station at New Hamburg, on line of N. Y. C. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches and  $2\frac{1}{2}$  miles from milk station. Highways, good gravel road. Nearest city, Poughkeepsie, population 27,936, 6 miles distant, reached by highway or trolley. General surface, nearly level. Altitude, 200 feet. Nature of soil, limestone. Acres that can be used as meadow, 80; in natural pasture, 45; in timber, 20, oak and hickory. Acres tillable, 150. Fruit, a small apple orchard in bearing. Best adapted to general farm crops, hay, potatoes, excellent garden land. Fences, stone and wire, fair condition. House, 1 story and attic, 6 rooms. Outbuildings: barn, 30x60, 125-ton silo; horse barn, 18x40; shed, 15x30, implement shed. House watered by well, barns by well and cistern, fields by springs and Wappingers creek. Hudson river, 4 miles

distant, Fishkill mountains, 6 miles distant. Occupied by tenant. Reason for selling, owner has several farms. Price, \$55 per acre. Terms, 75% will be taken on mortgage. Address John E. Townsend, owner, 15 Innis ave., Poughkeepsie, N. Y.

No. 403.— Farm of 144 acres; located 1 mile from Hopewell P. O. and railway station on line of Dutchess and N. Y., N. H. & H. rys.; 1 mile from school; 1 mile from Catholic and Reformed churches; 1 mile from milk station. Nearest city, Beacon, population 11,040, distant 10 miles, reached by rail and highway. General surface of farm, level. Nature of soil, gravelly loam. Best adapted to general farming and poultry. House,  $1\frac{1}{2}$  stories, 10 rooms. Outbuildings: 2 large barns, ice and poultry houses. House and fields watered by well and springs. Occupied by owner. This farm has 13 acres of lake area. Price, \$7,000. Address C. C. Bailey, owner, Hopewell Junction, N. Y., or E. J. Webb, agent, 114 Main st., Beacon, N. Y.

### ERIE COUNTY

Area, 1,171 square miles. Population, 528,985. Annual precipitation, 33.51 inches. Annual mean temperature, 49.7°. Number of farms, 8,178. County seat, Buffalo.

This county lies at the west end of the State on Lake Erie and Niagara river and is one of the larger counties both in area and population.

Its surface is level in the north, rolling in the center and hilly in the south. A region of level country of considerable extent lies along the Tonawanda creek and occupies the greater part of the northern tier of towns. The soil of the northern part of the county is generally a clay loam interspersed with beds of marl and muck; further south is found a clay gravelly loam resting upon limestone, and the southern hills are covered with drift consisting of clay and gravel. The soil of the valleys is generally of gravelly loam and alluvium. The principal pursuits are grain raising and dairying, the southern hill regions being well adapted to grazing and stock raising. It is also a strong fruit county and ranks high in the production of orchard and vineyard products. Buffalo, a city of 423,000 population, affords an unlimited market close at hand. From this city, the western terminal of the barge canal, reaching from the Hudson River to Lake Erie, an enormous commercial business is carried on by way of the lake to the towns along its shore.

The principal crops are as follows: Corn, 588,563 bushels; oats, 1,384,876 bushels; wheat, 355,870 bushels; buckwheat, 169,673 bushels; potatoes, 3,014,450 bushels; hay and forage, 207,202 tons. The value of all farm property is \$63,808,399, an increase of 23.7 per cent. The average price per acre of farm land, including buildings, is \$95.40. Much of the land is of high valuation because of its adaptability to truck gardening and the splendid orchards of apples, pears, peaches, plums, etc. Aside from these products there were produced 24,470,712 gallons of milk, the receipts from the sale of dairy products being \$2,323,714. There are 259 district schools and these schools and the many high schools of the county are all up to the high standard required by the State. Churches of all denominations are scattered throughout the rural sections. The county has nineteen agricultural organizations for the purpose of conserving some one or more interests in agriculture. Thirty-six dairy stations and factories meet the demand of the farmers for milk market. There are 163 miles of State and county roads and 1,680 miles of other improved highways in the county.

## TOWN OF ALDEN

Population 2,748

No. 404.—Farm of 83 acres; located  $\frac{1}{2}$  mile from West Alden P. O., and railway station on line of D. & W. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches; 2 miles from butter factory; 2 miles from cheese factory and  $\frac{1}{2}$  mile from milk station. Highways, level and good. General surface, level. Altitude, 820 feet. Nature of soil, 20 acres of dark loam, balance gravelly loam. Acres that can be used as meadow, 15; in natural pasture, 15; in timber, 10, hard wood and saw timber. Acres tillable, 73. Fruit, 40 apple trees, fall and winter varieties, 6 pear and 4 cherry trees. Best adapted to garden and general farm crops. Fences, mostly wire in good condition. House, 2 stories, 10 rooms, cellar, in good condition. Outbuildings: basement barn, 40x80; tool house; poultry house; hog house; work shop, all in good condition. House watered by well, barns, by wells, fields, by spring. Occupied by tenant. Reason for selling, to settle an estate. Price, \$5,000. Terms, \$4,000 cash, balance on mortgage at 5%. Address Henry Cantler, administrator, 15 W. Dullard ave., Lancaster, N. Y., or Chas. C. Grein & Co., brokers, 200 Pearl street, Buffalo, N. Y.

## TOWN OF AUBORA

Population 4,479

No. 405.—Farm of 70 acres; located 3 miles from East Aurora P. O., and railway station on line of Pennsylvania R. R., near high school; 3 miles from churches of all denominations. Nearest city, Buffalo, population 423,715, distant 20 miles, reached by rail or highway. General surface of farm, slightly rolling. Altitude, 900 feet. Nature of soil, gravel and partly loam. Acres in pasture, 10; in timber, 15; acres tillable, 45. Fruit, 4 acres apple orchard, fall and winter; pears, plums, cherries, berries, total 1 acre. Best adapted to all grains and vegetables. Fences, wire, in good condition. House, frame, 2 stories, 11 rooms, good cellar. Outbuildings: barn, 30x60; shed, 16x20; large hen house and hog house. Watered, house, by 3 good springs; fields, by 2 streams. Occupied by owner. Price, \$8,000. Terms, equipped,  $\frac{1}{2}$  cash, balance, 5%. This includes all tools, 5 cows, 3 heifers, 2 calves, 1 bull, 2 pigs, 100 chickens; the tools and crops included are worth half the price of the farm. Address John Wenst, owner, R. F. D., East Aurora, N. Y.

No. 406.—Farm of 65 acres; located 2 miles from East Aurora P. O. and railway station, on line of Pennsylvania Railway; 100 yards from school; 2 miles from churches of all denominations; 2 miles from milk station. Highways, chiefly State road. Nearest city, Buffalo, population 423,715, distant 20 miles, reached by rail or highway. General surface of farm, rolling. Altitude, 900 feet. Nature of soil, sandy loam. Acres tillable, 50. Fruit, 4 acres apple orchard, 50 trees, various kinds. Best adapted to truck farming. Fences, wire and other, fair condition. House, frame,  $1\frac{1}{2}$  stories, 8 rooms. Outbuildings: large barn, tool shed, corn crib, ice house, granary and hen house. Watered, house, by springs; fields, by stream. Occupied by tenant. Price, \$6,500. Terms, mortgage, \$4,800; \$1,700 cash. House has bath and toilet. Address Marie Vallean, owner, 21 W. 31st st., New York City.

No. 407.—Farm of 167 acres; located 1 mile from East Aurora P. O. and railway station on line of Pennsylvania R. R.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{4}$  miles from churches of all denominations. Highways, good, level. Nearest city, Buffalo, population 423,715, 20 miles distant, reached by rail or highway. Surface of farm, slightly rolling. Altitude, 900 feet. Soil, gravelly loam. Acres in timber, 12; acres tillable, 155. Fruit, 2 acres apple orchard, winter varieties; 12 pear trees, currants and berries. Best adapted to potatoes, corn and all grains. Fences, wire, in good condition. House, frame, 2 stories, 12 rooms. Outbuildings: barn, 40x80, with basement, good tenant house; silo, 16x30, good condition; hen house; hog house. Watered, house, by 2 drilled wells; fields, by stream. Occupied by tenant. Terms, \$80 per acre. There is a gas lease on farm bringing \$40 per year. Address Hiram A. Smith, owner, East Aurora, N. Y.

No. 408.—Farm of 37 acres; located 2 miles from East Aurora P. O. and railway station at East Aurora, on line of Pennsylvania R. R.;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches. Highway, good. Nearest city, Buffalo, population 423,715, distant 17 miles, reached by rail and State road. General surface of farm, rolling. Altitude, 900 feet. Nature of soil, clay loam. Acres tillable, 25. Fruit, 1 acre apple orchard. 30 trees Greenings and Spies: pears, cherries, plums and peaches for family use. Best adapted to general farming.



FIG. 293.— HOUSE ON FARM NO. 400, TOWN OF UNION VALE, DUTCHESS COUNTY.



FIG. 294.— HOUSE ON FARM NO. 402, TOWN OF WAPPINGERS, DUTCHESS COUNTY.



Fences, wire, in good condition. House, frame,  $1\frac{1}{2}$  stories, 8 rooms, 4 bed rooms, veranda. Barn and outbuildings, 24x60; hen house; hog house; wagon shed; granary; ice house; tool house. Watered, house, by 2 wells; fields, by stream in pasture. Occupied by tenant. Price, \$3,650. Terms,  $\frac{1}{2}$  cash or more. This farm must be sold to close an estate. Fine location on corner Center street, near the Clement stock farm. Address A. W. Kroll, owner, East Aurora, N. Y.

No. 409.—Farm of 130 acres; located 4 miles from East Aurora P. O. and railway station, on line of Pennsylvania R. R.;  $\frac{3}{4}$  mile from school; 4 miles from churches. Nearest city, Buffalo, population 423,715, distant 17 miles, reached by rail and State road. General surface of farm, chiefly level. Altitude, 925 feet. Nature of soil, black gravel. Acres tillable, 75; acres in woodland, 20; balance in pasture. Fruit, 1 acre apple orchard, 60 trees, general varieties, plums, pears, cherries, peaches and small fruit for family use, also grapes. Best adapted to corn, oats, wheat, hay and potatoes. Fences, chiefly wire, some rail; all lots, well fenced. House, frame, 2 stories, 11 large rooms; 2 wings, 46x26 main, wing 18x18 and 18x30; veranda, cellar. Outbuildings, 66x36 concrete; carpenter shop and ice house; hen house; hog house; granary; tool house; silo, 14x28, new. Watered, house, by well, new windmill; springs in each field. Occupied by tenant. Price, \$11,000. Terms  $\frac{1}{2}$  down, \$500 less for cash. Two fine sand and gravel pits on place. Can sell from pits to the extent of \$2,000 or \$3,000 for use on State road. Address E. V. Wright, owner, 385 Walnut street, East Aurora, N. Y.

No. 410.—Farm of 100 acres; located  $1\frac{1}{4}$  miles from East Aurora P. O. and railway station on the Pennsylvania R. R. Milk collected at door. Highways, State road. Seventeen miles from Buffalo, population 423,715, reached either by rail or State road. General surface, slightly rolling. Altitude, 900 feet. Nature of soil, clay subsoil. Acres in timber, 3; acres tillable, 95. Fruit, 4 acres of apple orchard, 200 trees; a few each of pear, cherry, plum and small fruit for family use. Best adapted to corn, oats, potatoes and hay. Fences, wire, in fair condition. House, frame, 10 rooms, 20x24, wing 16x20. Outbuild-

ings, barn, 30x61; horse barn, 27x44; hen, hog, wagon, tool house, granary and 2 silos, 12x28. House and barns watered by wells and springs; fields, by springs. Occupied by owner. Price, \$10,000. Address Charles S. Addington, owner, R. D. East Aurora, N. Y.

No. 411.—Farm of 30 acres; located 2 miles from East Aurora P. O. and railway station on the Pennsylvania R. R.; 2 miles from school and churches; 2 miles from milk factory, cheese factory, butter factory and condensing plant. Nature of highways, good. General surface of farm, level. Altitude, 900 feet. Nature of soil, loam with clay subsoil. Acres in pasture, 5; acres tillable, 25. Fruit, 102 apple trees, Baldwins and Spies, pear, cherry and plum trees, grapes, currants and berries. Fences, wire in good condition. New 2-story frame house in good condition, 6 rooms, 24x36. Outbuildings, barn, 30x20; hen house and other buildings. Occupied by owner. Reason for selling, to settle estate. Price, \$3,350. Terms,  $\frac{1}{2}$  cash. Address S. C. Allen, owner, East Aurora, N. Y.

No. 412.—Farm of 62 acres; located 1 mile from East Aurora P. O. and railway station on the Pennsylvania R. R.; 1 mile from school and churches. Milk collected at the door. Highways, good. General surface of farm, level. Altitude, 900 feet. Nature of soil, gravel loam. Acres in pasture, 15; acres tillable, 45. Fruit, 40 apple trees of different varieties, 40 pear and 15 cherry trees and small fruit. Best adapted to general farm crops. Fences, wire, in good condition. Eight-room frame house, 2 stories, in good condition. Outbuildings, barn, 30x40, and other buildings, in good condition. House and barns watered by well; fields, by spring. Occupied by tenant. Reasons for selling, the farm was left to owner who has large farm and cannot care for this. Price, \$5,000. Terms, \$2,000 down, balance on mortgage, 5%. Address Henry S. Stafford, owner, East Aurora, N. Y.

No. 412½.—Farm of 60 acres; located 2 miles from East Aurora P. O. and railway station on the Pennsylvania R. R.;  $1\frac{1}{2}$  miles from school and churches. Altitude, 900 feet. Nature of soil, loam. General surface, rolling. Acres in pasture, 30; acres tillable, 30. Fruits, 30 apple and few pear trees. Best adapted to hay, oats, wheat, corn and potatoes. Fences, wire in good con-

dition. New frame, 2-story, 9-room house, 27x25, with wing, 16x20. New barn, 36x60, with basement, hen house and other outbuildings, all new. House and barn watered by well; fields, by spring and stream. Occupied by owner. Price, \$7,000. Terms, half cash, balance on mortgage, 5%. Address Howard Hatch, owner, East Aurora, N. Y.

## TOWN OF BRANT

Population 2,424

No. 413.—Farm of 75 acres; located 1 mile from Farnham P. O. and railway station, on line of L. S. & Nickel Plate Ry.; 1 mile from school; 1 mile from churches, Catholic, Methodist; 1 mile from butter factory; 1 mile from cheese factory and milk station. Highway, good. Nearest city, Buffalo, population 423,715, distant 26 miles. General surface of farm, level. Altitude, 800 feet. Nature of soil, loam. Acres in timber, 10; acres tillable, 50. Fruit, 4 acres apple orchard, 200 trees, winter varieties, some pears,  $\frac{1}{2}$  acre grapes. Best adapted to general farming. Fences, in good condition. House, frame,  $1\frac{1}{2}$  stories, 8 rooms, veranda, cellar. Barns, outbuildings, 30x40, 40x60; hen house; wagon shed. Watered, house, by well; fields, by springs and stream. Occupied by owner. Price, \$10,000. Terms, cash; mortgage, \$2,500, 5%. This farm is on the State road; gas in house; farm leased for gas drilling; yearly rental, \$75. Address Henry S. Stafford, owner, East Aurora, N. Y.

No. 414.—Farm of 75 acres; located 1 mile from Farnham P. O. and railway station on line Pennsylvania R. R.; 1 mile from school and churches. Highways, State road. Nearest village, Farnham, population 516. General surface, rolling. Nature of soil, clay and sandy. Acres in meadow, 10; in pasture, 25. Acres tillable, 40. Fruit, 18 trees, all varieties. Best adapted to general farm crops and grapes. Fences, wire, fair condition. House, 10 rooms, fair condition. Outbuildings, fair condition. House and barns watered by wells, fields, by creek. Price, \$5,500. Terms to suit purchaser. Address William Monlow, owner, Irving, N. Y. R. F. D.

No. 415.—Farm of 47 acres; located 2 miles from Farnham P. O. R. F. D. and railway station on line of Pennsylvania R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches. Highways, State

road. Nearest village, Farnham, population 516. General surface of farm, rolling. Acres in meadow, 10; pasture, 5; acres tillable, 25. Fruit, 30 trees, varieties. Best adapted to grapes. Fences, wire, fair condition. House, 8 rooms, fair condition. Barn, new, 30x40. Outbuildings, fair condition. Occupied by tenant. Price, \$3,000. Terms, to suit purchaser. Address Mrs. Carrie Folk, guardian, Farnham, N. Y.

No. 416.—Farm of 30 acres, located  $1\frac{1}{2}$  miles from Farnham P. O. and railway station, on line of Penn. & L. S. R. R.;  $\frac{1}{3}$  mile from school; 5 miles from churches; 2 miles from butter factory; 2 miles from cheese factory;  $1\frac{1}{2}$  miles from milk station. Highway, good. Nearest village Angola, population 806, 5 miles distant, reached by highway. Surface generally level, just enough slope for drainage. Altitude 600 feet. Nature of soil soft clay loam and sandy loam. Acres that can be used as meadow 8. All tillable. Fruit, 4 acres grapes, 18 apple, 5 pear, 5 cherry, 6 plum, and 7 peach trees, all in good bearing condition. Best adapted to grapes, fruit of all kinds and canning factory crops. Fences, wire, good condition. House, frame,  $1\frac{1}{2}$  story cottage, 9 rooms. Natural gas for light and heat, in excellent condition. Outbuildings, barn 40x60, concrete stables for cows and horses, all improvements, new hollow tile and frame poultry house, hay barn, wagon house, etc. Horse watered by well, barns by well and spring and fields by spring. Lake Erie,  $2\frac{1}{2}$  miles distant. Occupied by owner. Reason for selling other business. Price \$5,000, equipped. Terms, \$2,500 cash, balance on mortgage at 5%. Address, W. J. Critoph, owner, Irving, N. Y., R. F. D., or James Guarino, broker, Angola, N. Y.

## TOWN OF CLARENCE

Population 2,991

No. 417.—Farm of 60 acres; located  $\frac{3}{4}$  mile from Clarence P. O., R. D. 1, and station, on line of W. S. R. R.;  $\frac{3}{4}$  mile from high school, Protestant churches, butter factory and milk station. Roads are macadamized. Nearest city, Buffalo, population 423,715, distant 18 miles by rail or good roads. Surface, level. Soil, clay and gravelly loam. 58 acres tillable; 2 acres, timber, second growth, hard wood. Has 125 apple, 35 pear, 24 plum, 6 cherry and 2

quince trees, all of good varieties, good grapevines, etc. Land is adapted to general farm crops, and especially for dairying. Fences, wire, in good condition. Ten-room house, with cellar, all in good condition. Barn, 35x60; 2 silos; hog pen, 18x30; tool house; 2 chicken houses; corn crib; woodshed and shop, 20x45; stone smoke house. Barn contains a horse stable, with 4 stalls and a concrete cow stable for 10 head of cattle, barn in good condition. House has water from dug wells; barns, the same, water piped direct to cow stable from outside. Occupied by tenant. Reason for selling, owner has retired. Price, \$5,000. Terms, \$1,500, balance on mortgage. Address J. G. Helwig, owner, Clarence, N. Y.

## TOWN OF COLLINS

Population 4,568

No. 418.—Farm of 200 acres; located 3 miles from Collins P. O. and railway station, on line of Erie R. R.; 1 mile from school; 3 miles from churches; 3 miles from butter factory; 3 miles from cheese factory and milk station. Highways, State road. Nearest village Gowanda, population 2,012, 6 miles distant, reached by rail or highway. General surface nearly level. Altitude, 1,000 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 70; in natural pasture, 70; in timber, 25, hard wood, 350 sugar maples. Acres tillable, 130. Fruit, 5 acres of fall and winter varieties, pears, cherries, peaches, plums and small fruit. Best adapted to general farm crops, 18 acres of alfalfa. Fences, wire in good condition. House, frame, 2 story, 12 rooms, concrete cellar, good condition. Outbuildings: main barn, 40x100, concrete foundation and stables; horse barn, 36x40; milk house with running water; hog house; poultry house; wagon house, all have concrete floors, and new silo. House watered by wells and springs, barns, by wells and spring, fields, by stream. Occupied by tenant. Reason for selling, old age. Price, \$11,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Ansley Sisson, owner, 193 Norwood avenue, Buffalo, N. Y.

## TOWN OF CONCORD

Population 4,391

No. 419.—Farm of 350 acres; located 6 miles from Springville P. O., R. D. 1,

and railway station on the B., R. & P. R. R.; 1 mile from school and churches; 5 miles to butter factory; 2 miles from cheese factory; 6 miles from milk station and condensing plant. Milk called for; 1 mile from State road. Highway, good. General surface, level. Altitude, 1,200 feet. Nature of soil, dark loam, clay subsoil. Acres in meadow, 100; in pasture, 100; in timber, 10; all tillable. Fruit, 8 acres of apples, 15 acres of pears, plums and cherries. Best adapted to corn, hay, oats, rye, buckwheat and wheat. Fences, woven wire, in good condition. House, 30 rooms, natural wood finish, inlaid floors. Outbuildings, cow barn, 48x208; horse barn, 40x100. Tenant house No. 1, 12 rooms; No. 2, 7 rooms; amusement hall, 40x100. House, barns, and fields watered by tank supplied by wind mill and gasoline engine. Cattaraugus creek 3 miles distant. Occupied by owner. Possession can be given at any time. Reason for selling, owner wishes smaller farm. Price, \$40,000. Terms, \$20,000 cash, balance at 6%. Price includes all stock, fodder, crops, tools and furniture, 60 cows and 7 horses. Address Byron Leunis, owner, Springville, N. Y., or C. J. Ellis & Co., agents, Springville, N. Y.

No. 420.—Farm of 106 $\frac{1}{4}$  acres; located 3 $\frac{1}{2}$  miles from Springville P. O. and railway station on the B., R. & P. R. R.; 1 $\frac{1}{2}$  miles from school and churches; 3 $\frac{1}{2}$  miles from milk station and condensing plant. Highways, State road. General surface, level. Altitude, 1,200 feet. Nature of soil, dark loam, clay subsoil. Acres in meadow, 40; in pasture, 25; in timber, 20, 2d growth of beech and maple. Acres tillable, 60. Fruit, 53 apple and 5 plum trees and  $\frac{1}{2}$  acre of raspberries. Best adapted to corn, hay, oats and potatoes. Fences, good barbed wire. Ten-room house, good condition. Outbuildings, cow barn, 40x56; horse barn, 25x36; hen house, hog house and granary. House and barns watered by well and cistern; fields, by springs. Twenty miles from Lake Erie. Occupied by owner. Possession given at any time. Reason for selling, owner lost leg and arm. Price, \$6,700. Terms, \$2,800 cash with \$100 or more yearly payment to suit buyer. Price includes 7 cows, 3 horses, brood sow, 70 hens, all crops, tools, etc. Address Leslie Reynolds, owner, Springville, N. Y., or C.

J. Ellis & Co., agents, Springville, N. Y.

No. 421.—Farm of 261 acres; located 6 miles from Springville P. O., R. D. 1, and railway station on the B., R. & P. R. R.; 1 mile from school and churches; 5 miles from butter factory; 2 miles from cheese factory; 6 miles from milk station and condensing plant. Milk called for. Nature of highways, good. Nearest city, Buffalo, population 423,715, 30 miles distant. General surface of farm, partly rolling, mostly level. Altitude, 1,200 feet. Nature of soil, dark loam. Acres in meadow, 100; in pasture, 111; in timber, 50. Acres tillable, 211. Fruit, 4 acres of apples. Best adapted to corn, hay, oats, wheat and buckwheat. Fences, mostly woven wire, good condition. House, 1½ stories, 7 room. Outbuildings, round cow barn, 100 feet in diameter, 92 feet high, concrete floor; 2 concrete lined silos, concrete milk house. Water supplied to house by well and windmill; also to barn and fields. Eighteen miles from Lake Erie. Occupied by tenant. Reason for selling, owner has business in Colorado. Price, \$10,440. Terms, \$3,000 cash, balance on mortgage at 6%, 2,500 trees in maple sugar grove, sugar house and tools valued at \$400. Address Claude Ellis, owner, Springville, N. Y., or C. J. Ellis & Co., agents, Springville, N. Y.

No. 422.—Farm of 142½ acres; located 2 miles from East Concord P. O.; ½ mile from Riders Station on the B. & S. R. R.; 2 miles from school and churches; 3 miles from butter factory; 2 miles from cheese factory; ½ mile from milk station. Highways, state road. Nearest village, Springville, population 2,246, 5½ miles distant. General surface, rolling. Altitude, 1,200 feet. Nature of soil, dark loam, clay subsoil. Acres in meadow, 30; in pasture, 60; in timber, 20, 1st and 2d growth of maple and hemlock. Acres tillable, 100. Fruit, 350 apple, 25 pear and few cherry trees. Best adapted to corn, hay, oats, peas and potatoes. Fences, good barbed wire. House, practically new, 11 rooms with good cellar. Outbuildings, cow barns, 70x30 and 35x66; concrete milk house, small horse barn, hen house and hog house. House watered by well and cistern; barns, by well; fields, by springs and brooks. Occupied by tenant. Reason for selling, owner is a woman and cannot man-

age farm. Price, \$7,500. Terms, \$2,000 cash, 5% interest, \$200 yearly and interest. Address Caroline Bury, owner, Springville, N. Y., or C. J. Ellis & Co., agents, Springville, N. Y.

#### TOWN OF EAST HAMBURG

Population 2,636

No. 423.—Farm of 140 acres; located 2½ miles from Orchard Park P. O. and railway station, on line of B. R. & P. R. R.; ¼ mile from school; ¼ mile from churches; 2½ miles from butter factory; 2½ miles from cheese factory and milk station. Highways, good. Nearest city, Buffalo, population 423,715, 9 miles distant, reached by highway or rail. General surface, part rolling, generally level. Altitude, 900 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 35; in natural pasture, 40; in timber, 25, beech and chestnut. Acres tillable, 100. Fruit, 5 acres of apples, standard fall and winter varieties, 20 pear, 25 cherry and 6 plum trees, all in good condition. Best adapted to potatoes. (splendid potato land), all farm and garden crops. Fences, wire and rail, good condition. House, frame, 2 stories, 11 rooms, in good condition. Outbuildings, barn 32x84, in good condition; horse barn, 30x40; poultry house; hog pen; all painted. House watered by well, barns, by well and fields, by springs. Lake Erie, 9 miles distant. Occupied by owner. Reason for selling, wishes to retire. Price, \$11,900. Terms, \$4,500 cash, balance on mortgage at 5%. Address John Scherff, owner, Orchard Park, N. Y.

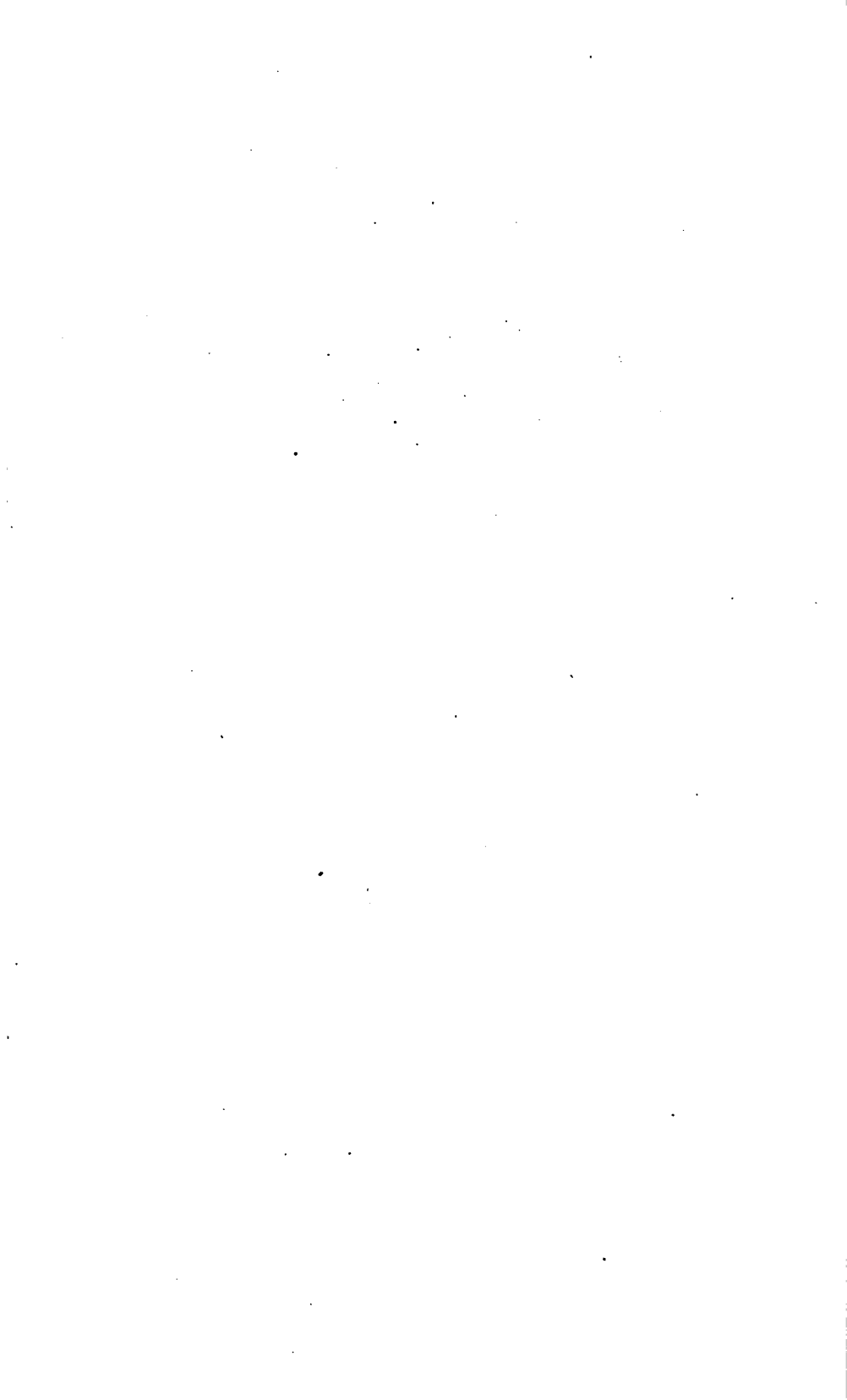
#### TOWN OF EDEN

Population 2,526

No. 424.—Farm of 100 acres; located 2½ miles from North Collins P. O., R. D. No. 2, and railway station, on line of Erie R. R.; 1 mile from school; 2½ miles from Catholic and Protestant churches; 2½ miles from cheese factory and milk station; 7 miles from milk bottling plant. Highways, good. Nearest large village, Hamburg, population, 2,134, 8 miles distant, reached by rail and State road. Surface of farm, slightly rolling. Soil, sandy and gravelly loam. Acres in meadow, 12; in natural pasture, 40; in timber, 30, maple, chestnut and hemlock. Acres tillable, 40. Fruit, grapes, apples, plums, pears, quinces and cherries. 2½



FIG. 295.—HOUSE AND BUILDINGS ON FARM 419, TOWN OF CONCORD, ERIE COUNTY.



acres raspberries, 1 acre strawberries. Best adapted to fruit and vegetables. Fences, rail, wire and stump, poor condition. Outbuildings, 2 barns, one 30x40, and one 30x30, good condition. Watered, house and barn, by well. Occupied by owner. Reason for selling, owner unable to work place. Price, \$7,000. Terms, \$4,200 cash, remainder on mortgage. Price includes stock, tools and crops. Address, F. P. Robinson, owner, North Collins, N. Y.

## TOWN OF ELMA

Population 2,130

No. 425.—Farm of 118 acres; located 1 mile from East Aurora P. O. and railway station, on line of Penna. R. R.; 1 mile from school; 1½ miles from churches; 1½ miles from butter factory; 1½ miles from cheese factory and milk station. Highways, good. General surface, rolling. Altitude, 900 feet. Nature of soil, clay and gravel loam. Acres that can be used as meadow, 25; in natural pasture, 25. Acres tillable, 105. Fruit, 150 apple trees of standard varieties, 28 pear, 25 cherry, 20 plum trees, all in bearing. Best adapted to corn, hay, wheat and potatoes. Fences, wire, good condition. House, frame, 2½ stories, 12 rooms/hot water heat. Outbuildings: basement barn, 66x56, gambrel roof, 30 stanchions; hog house; poultry house; 2 story wagon and tool shed, 26x60. House watered by well, barns by well, fields by spring. Occupied by owner. Reason for selling, ill health. Price, \$11,800. Terms, \$3,000 cash, balance on mortgage. Address James B. Reckettson, owner, East Aurora, N. Y.

No. 426.—Farm of 64 acres; located 1 mile from Jameson Road and 2 miles from East Aurora P. O. and railway station, on line of Pennsylvania Ry.; 1 mile from school; 2 miles from churches of all denominations; 2 miles from milk station. Highway, State road, good. Nearest city, Buffalo, population 423,715, distant 17 miles, reached by rail. General surface of farm, level. Altitude, 900 feet. Nature of soil, clay loam. Acres tillable, 64. Fruit, 1 acre apple orchard, 60 trees, a few each of pears, cherries, plums and quinces. Small fruit for family use. Best adapted to general farming and dairying. House, frame, 2 stories, 10 rooms, 2 verandas, cellar. Barns, 30x54, 20x24; hen house, 12x26. Wa-

tered, house, by 4 wells; fields, by 3 springs. Reason for selling, too far from main farm to work conveniently. Price, \$6,400. Terms, ½ cash. Barns accommodate 3 horses, 20 cows. Address Calib F. Brown, owner, R. F. D., East Aurora, N. Y.

No. 427.—Farm of 87 acres; located 2¼ miles from East Aurora P. O. and railway station, on line of Pennsylvania railway; ¾ mile from school; 2 miles from churches; butter and cheese factory at farm. Nature of highway, level, chiefly State road. Nearest city, Buffalo, population 423,715, distant 20 miles, reached by rail. General surface of farm, level. Altitude, 900 feet. Nature of soil, loam. Acres in timber, 10. Best adapted to corn, hay, grain, potatoes. Fences, barbed wire and rail. House, frame, 1¾ stories, 3 verandas, cellar. Outbuildings, barn, 100x40, hog house, wagon shed, tenant house in good condition. Watered, house, by 4 good wells. Occupied by owner. Price, \$150 per acre. Dairy farm, 35 cows; milking machine, silos, etc. Creamery in front of farm. Purchaser must buy share in creamery. Address B. J. Cole, owner, R. F. D., East Aurora, N. Y.

## TOWN OF EVANS

Population 3,124

No. 428.—Farm of 31 acres; located 2 miles from Angola P. O., and railway station, on lines of L. S., N. P. & Penna. R. R.'s; ¼ mile from school; 2 miles from churches; 2 miles from butter factory; 2 miles from cheese factory and milk station. Highways, level; good condition. General surface slightly rolling, good drainage. Altitude, 650 feet. Nature of soil, sand and gravelly loam. Acres that can be used as meadow, 10. Acres tillable, all. Fruit, 10 acres of grapes in bearing, 8 acres of raspberries, 4,000 strawberries, 200 young peach trees, variety of pears, cherries, etc. Best adapted to fruit. Fences, wire, in good condition. House, new, frame, 2 stories, 7 rooms, verandas, good condition. Outbuildings, new barn, 20x40; brick poultry house, small bungalow for tenant. House watered by well, barns, by well and fields, by spring. Lake Erie, 3 miles distant. Occupied by owner's nephew. Reason for selling, has other business. Price, \$4,500. Terms, \$2,500 cash, balance on mortgage at 5%. Address, Mrs. E. Smith, owner, 142 Breckenridge St.,

Buffalo, N. Y., or James Guarino, broker, Angola, N. Y.

No. 429.—Farm of 60 acres; located  $\frac{3}{4}$  mile from Derby P. O. and railway station, on line of L. S. & M. S. R. R.;  $\frac{3}{4}$  mile from school;  $\frac{3}{4}$  mile from churches;  $\frac{3}{4}$  mile from B. & L. E. trolley; milk station on farm. Highway, level. Nearest village, Angola, population 806,  $4\frac{1}{2}$  miles distant, reached by highway and trolley. General surface, gentle slope north and south. Altitude, 600 feet. Nature of soil, clay loam and dark loam. Acres that can be used as meadow, 15. All acres tillable. Fruit, 5 acres of grapes, 4 peach, 5 pear, 30 plum, 2 prune trees, 120 currants. Best adapted to fruit and cannery products. Fences, wire, good condition. House,  $1\frac{1}{2}$ -stories, 10 rooms, 24x34. Outbuildings: main barn, 24x35; barn, 24x35; horse barn, 20x30; poultry house, 15x50. House watered by well, barns, by well, fields, by well, Lake Erie,  $2\frac{1}{2}$  miles distant. Occupied by owner. Reason for selling, wishes to retire. Price, \$7,500. Terms, \$4,000 cash, balance on mortgage. Address Nels Hanson, owner, Derby, N. Y., R. F. D., or James Guarino, broker, Angola, N. Y.

No. 430.—Farm of 134 acres; located  $2\frac{1}{2}$  miles from Angola P. O., and railway station, on lines of L. S. & Penna. R. R.;  $\frac{1}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches; 2 miles from cheese factory and  $1\frac{1}{2}$  miles from milk station. Highways, good. General surface, gentle slope south and northwest. Altitude, 600 feet. Nature of soil, clay loam, sandy loam and slate. Acres that can be used as meadow, 30; in natural pasture, 35. All tillable. Fruit, 9 acres of grapes, 100 apple, 70 plum, 12 cherry, 10 pear, 5 quince and 5 prune trees. Best adapted to fruit and cannery produce. Fences, woven wire, good condition. Outbuildings: barn, 40x60; poultry house, 16x70, built of concrete blocks. House watered by well, barns, by well, fields, by well; Lake Erie, 4 miles distant. Occupied by owner. Reason for selling, desires a smaller farm. Price, \$9,400. Terms, \$2,000 cash, balance on first and second mortgage. Address J. Bush & J. Koch, owners, Angola, N. Y., R. F. D., or James Guarino, broker, Angola, N. Y.

No. 431.—Farm of 201 acres; located 2 miles from Angola P. O., and railway station, on lines of L. S. & Penna. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from

churches; 3 miles from butter factory; 3 miles from cheese factory; 1 mile from milk station and trolley at Price's crossing. Highways, good. General surface, nearly level, gentle slope to the east. Altitude 700 feet. Nature of soil, clay loam, sandy loam and 20 acres of black loam. Acres that can be used as meadow, 25; in pasture, 80. All tillable. Acres under cultivation, 110. Fruit, 30 apple, 14 pear, 5 peach and 3 cherry trees. Best adapted to dairying, fruit and vegetables. Fences, wire, in good condition. House, frame,  $1\frac{1}{2}$ -stories, 9 rooms, in good condition, but needs painting. Outbuildings: barn 42x85, silo 16x28, wagon and tool house 30x40, hog house and poultry house. House watered by well, barns, by well and fields, by creek; Lake Erie, 5 miles distant. Occupied by owner. Reason for selling, desires a smaller fruit farm. Price, \$20,100, equipped. Terms, \$14,000 cash, balance on mortgage. Address F. Rehberg, owner, Angola, N. Y., or James Guarino, broker, Angola, N. Y.

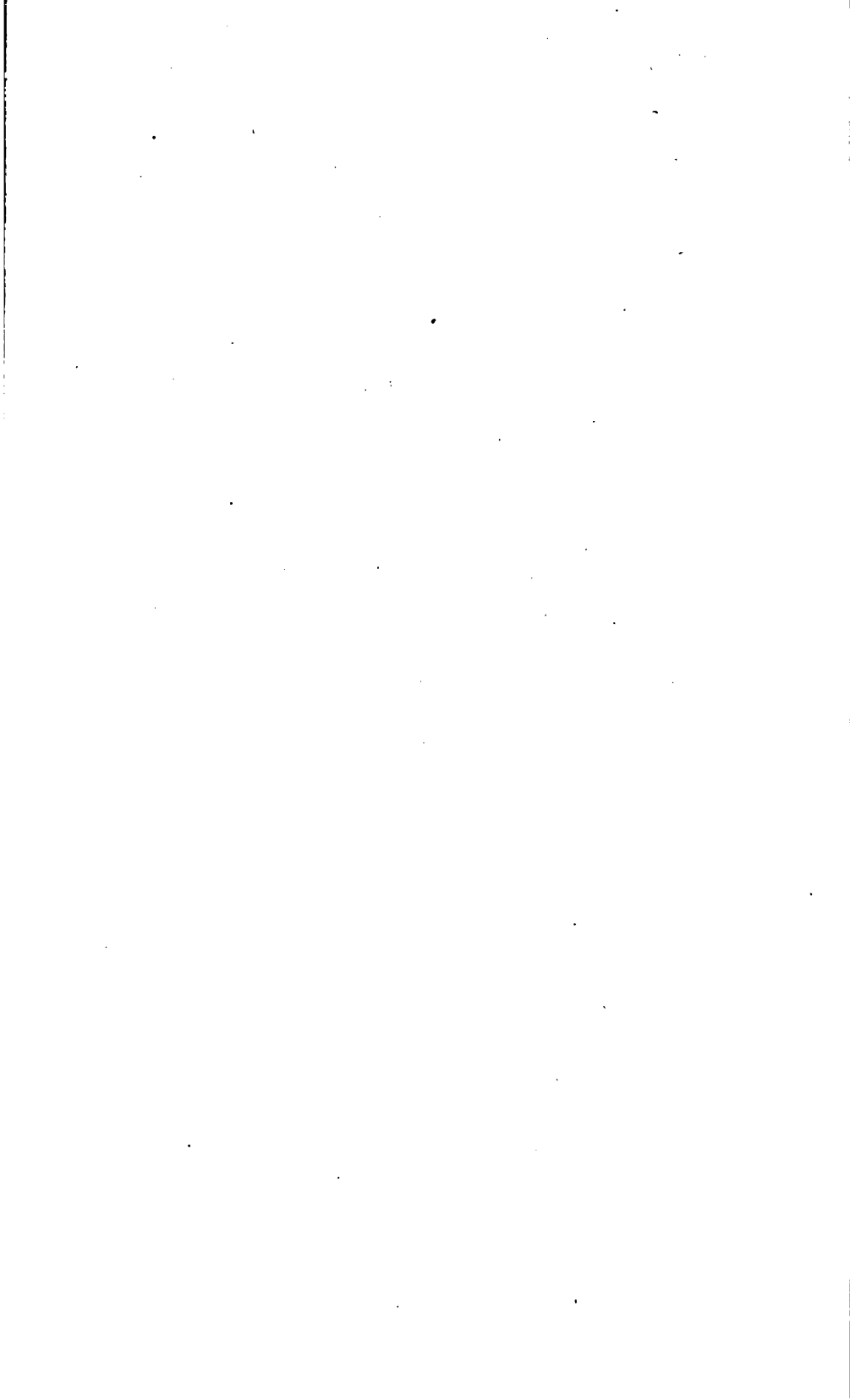
No. 432.—Farm of 20 $\frac{1}{2}$  acres; located  $1\frac{1}{2}$  miles from Angola P. O., and railway station, on line of L. S. & N. P. R. R.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $\frac{1}{8}$  mile from B. & L. trolley;  $\frac{1}{2}$  mile from milk station. Highways, good, level. General surface, level, gentle slope to east. Altitude, 600 feet. Nature of soil, clay, sandy and dark loam. Acres that can be used as meadow, 8; in natural pasture,  $1\frac{1}{4}$ ; all tillable. Fruit,  $4\frac{1}{2}$  acres of grapes, 65 apple trees, standard varieties, 4 pear, 4 cherry, 7 quince and 2 plum trees. Best adapted to fruit, tomatoes and other canning factory crops. Fences, wire, in good condition. House, 1-story cottage, 8 rooms, cellar, verandas, etc., good condition. Outbuildings: barn 20x46, poultry house, hog house, all good condition. House watered by well, barns, by well, fields, by well in pasture. Lake Erie, 1 mile distant. Occupied by owner. Reason for selling, old age. Price, \$3,800. Terms, \$2,000 cash, balance on mortgage. Address C. L. Fenham, owner, Angola, N. Y., R. F. D., or James Guarino, broker, Angola, N. Y.

No. 433.—Farm of 21 $\frac{1}{2}$  acres, located  $\frac{3}{4}$  mile from Farnham P. O. and railway station, on line of Penna. and L. S. R. R.;  $\frac{3}{4}$  mile from school;  $\frac{3}{4}$  mile from churches;  $\frac{1}{4}$  mile from milk station and B. & L. E. trolley. Highways,



FIG. 296.—BUILDINGS ON FARM 420, TOWN OF CONCORD, ERIE COUNTY.





good. General surface nearly level. Altitude 600 feet. Nature of soil soft fertile clay. Acres that can be used as meadow 8. Acres tillable all. Fruit,  $5\frac{1}{2}$  acres of grapes in bearing, 30 apple trees in bearing, 110 young pears, 100 young cherry, 50 young peaches, 5 young plum trees,  $\frac{3}{4}$  acres of Columbian berries and  $\frac{1}{2}$  acre of strawberries in bearing. Best adapted to fruit and canning factory crops. Fences, wire, good condition. House, 1 story cottage, 6 rooms, good condition. Outbuildings: barn 30x40, in good condition, large poultry house 12x40. House watered by wells, barns by well. Lake Erie, 1 mile distant. Occupied by owner. Reason for selling, wishes to retire. Price, \$3,600, equipped. Terms: reasonable amount of cash. Price includes all stock and tools, grain, hay, etc. Address, Peter Johnson, owner, Irving, N. Y., R. F. D., or James Guarino, broker, Angola, N. Y.

## TOWN OF HAMBURG

Population 6,050

No. 434.—Farm of 100 acres;  $1\frac{1}{2}$  miles from Hamburg P. O.; 2 miles from railway station at Hamburg, on line of Erie and B. & S. R. R., and from school, churches and milk station;  $\frac{1}{4}$  mile from cheese factory. Highways, State road, improved macadam. Nearest village, Hamburg, population 2,134, distant  $1\frac{1}{2}$  miles, reached by highway. Surface of farm, slightly rolling. Soil, gravel and sandy loam. Acres in pasture, 12. Acres tillable, all. Fruit, about 50 apple trees, a few plum and pear trees. Best adapted to gardening and potatoes. Fence around pasture. Good house, 28x40, with wing. Large ample barns; watered by wells. Half mile from Eighteen Mile Creek. Occupied by owner. Reason for selling, owner wishes to live near his relatives. Price, \$125 per acre. Terms,  $\frac{1}{2}$  cash, balance 6% mortgage. Address George Riefler, owner, Hamburg, N. Y., or Jacob Hauck, agent, Hamburg, N. Y.

## TOWN OF HOLLAND

Population 1,468

No. 435.—Farm of 105 acres; located  $2\frac{1}{2}$  miles from Holland P. O. and railway station, on line of Pennsylvania R. R.;  $\frac{1}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches; 1 mile from butter factory;  $2\frac{1}{2}$  miles from milk station. Nearest large village, East Aurora, 10 miles dis-

tant, reached by rail and highway, population 2,781. General surface, slightly rolling. Nature of soil, gravelly loam. Acres in meadow, 50; in pasture, 35; in timber, 20, beech, maple and hemlock. Acres tillable, 85. Fruit, 50 apple trees, small fruit for home use. Best adapted to corn, wheat, oats and hay. Fences, board and rail. House, 2 stories and wing, 13 rooms. Outbuildings: horse barn, 25x35, old but in good repair; new cow barn, 30x60, concrete floor in basement. Occupied by owner. Price, \$5,500. Terms, \$3,000 cash, balance on mortgage. Reason for selling, in other business. Address Paul J. Wurst, owner, Holland, N. Y., or John Bolender, agent, Holland, N. Y.

No. 436.—Farm of 102 acres; located  $1\frac{1}{2}$  miles from Java P. O.; 3 miles from Java Center railway station, on line of Buffalo, Attica and Arcade R. R.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from church; 2 miles from butter factory; 5 miles from milk station. Nearest large village, East Aurora, population 2,781, 10 miles distant, reached by level highway. General surface, rolling. Nature of soil, gravelly and clay loam. Acres in meadow, 40; in pasture 40; in timber, 22, maple and beech. Acres tillable, 60. Fruit, 140 apple trees, 4 pears, 2 cherries and 3 plums. Best adapted to corn, hay and potatoes. Fences, mostly wire, some rail. House, 12 rooms, 2 stories. Outbuildings: barn, 30x60, gambrel roof, basement stables with concrete floors; silo, hog house, poultry house and tool house. House watered by well, barns, by running water, fields, by springs. Reason for selling, owner has another farm. Price, \$4,800. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Frank Shellman, owner, Holland, N. Y., or John Bolender, broker, Holland, N. Y.

No. 437.—Farm of 72 acres; located  $2\frac{1}{2}$  miles from Holland P. O., R. D., and railway station, on line of Pennsylvania R. R.;  $\frac{1}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from butter factory and milk station. Nearest large village, Arcade, population 1,294, 8 miles distant, reached by rail and highway. General surface, slightly rolling. Nature of soil, clay loam, some gravel loam. Acres in meadow, 30; in pasture, 30; in timber, 12, maple and beech. Acres tillable, 60. Fruit, 20 apple trees, small fruit for family use. Best adapted to potatoes, corn and hay. Fences, wire, in good repair. House, 2 stories and wing, 8 rooms. Outbuildings: barn, 30x

40, good repair; tool house, poultry and hog house. House and barns watered by wells, fields, by springs. Occupied by owner. Reason for selling, has another farm. Price, \$3,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 6%. Address Elmer Day, owner, Holland, N. Y., or John Bolender, agent, Holland, N. Y.

No. 438.—Farm of 110 acres; located  $1\frac{1}{2}$  miles from Holland P. O. and railway station, on line of Pennsylvania R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter and cheese factory and milk station. Highways, good. Nearest large village, East Aurora, population 2,781, 10 miles distant, reached by rail and highway. General surface of farm, rolling. Nature of soil, gravel and clay loam. Acres in meadow, 30; in pasture, 40; in timber, 20, beech and maple. Acres tillable, 70. Fruit, 30 apple trees, small fruit for family use. Best adapted to hay, oats, wheat and corn. Fences, wire, in good condition. House, 7 rooms,  $1\frac{1}{2}$  stories, good condition. Outbuildings: barn, 35x50, basement stable; tool house, poultry and hog house, all in good condition. House and barns watered by wells, fields, by springs. Occupied by owner. Reason for selling, in other business. Price, \$4,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 6%. Address D. F. Tanner, owner, Holland, N. Y., or John Bolender, agent, Holland, N. Y.

#### TOWN OF LANCASTER

Population 9,663

No. 439.—Farm of 59 acres; located  $2\frac{1}{2}$  miles from Lancaster P. O. and railway station, on line of N. Y. C. and trolley railway;  $\frac{1}{4}$  mile from school,  $1\frac{1}{4}$  miles from churches of all denominations;  $1\frac{1}{4}$  miles from milk station. Highway, good, chiefly State road. General surface of farm, slightly rolling. Altitude, 725 feet. Nature of soil, black loam, clay subsoil. Acres in timber,  $8\frac{1}{2}$ . Acres tillable, 50. Fruit, 2 acres apple orchard, 60 trees, winter varieties, 2 pear, 5 cherry, 8 plum, 1 peach, and berries. Best adapted to all kinds of grain and vegetables. Fences, wire, in good condition. House, frame, 2 stories, 8 rooms, veranda, good cellar. Outbuildings, large barn, hen house, hog house, wagon house. Watered, house, fine well; water in house, bath. Price, \$7,000. Address F. Schade, owner, Lancaster, R. F. D. 2, N. Y.

#### TOWN OF MARILLA

Population 1,382

No. 440.—Farm of 71 acres; located 1 mile from Marilla P. O. and railway station, on line of Erie R. R.; 1 mile from school; 1 mile from churches. Highway, good. Nearest city, Buffalo, population 423,715, distant 22 miles. General surface of farm, rolling. Altitude, 800 feet. Nature of soil, gravelly. Acres in woodland, 8. Acres tillable, 60. Fruit, 70 or 80 apple trees, all kinds of berries for family use. Best adapted to potatoes, corn, beans and grain. Fences, wire and rail. 2 frame houses, 18x24, 16x24, each of 9 rooms, verandas, cellars. Barns, 26x36, 32x20, 1 with basement; shed, granary, chicken house. Watered, house, by well; fields, by springs. Occupied by tenant. Price, \$6,750. Terms, \$3,000 to \$4,000 cash, balance, mortgage at 6%. Stage goes by farm twice a day. Address J. H. Foster, owner, Marilla, N. Y., or Chas. C. Grein, agent, 200 Pearl St., Buffalo, N. Y.

No. 441.—Farm of 90 acres; located  $\frac{1}{4}$  mile from Porterville P. O.; 4 miles from railway station at East Aurora, on line of Pennsylvania Railway;  $\frac{1}{4}$  mile from school; 1 mile from churches, Catholic, Methodist, Ger. Luth. Highway, hilly. Nearest city, Buffalo, population 423,715. General surface of farm, rolling and level. Altitude, 950 feet. Nature of soil, sandy loam and gravel. Acres tillable, 50. Fruit, 1 acre apples, 30 trees, general varieties. Best adapted to dairying, potatoes and corn. Fences, chiefly wire, good condition. House, frame, 2 stories, 10 rooms. Barn, 34x100, shed attached, 18x100; wagon house, granary. Watered, house, by springs; fields, by Buffalo creek. Occupied by owner. Price, \$85 per acre. Terms,  $\frac{1}{2}$  cash. This farm is well fertilized and lies about 1 mile from the State road. Address C. C. Adams, owner, Porterville, R. F. D., N. Y.

#### TOWN OF NEWSTEAD

Population 3,760

No. 442.—Farm of 119 acres; located 2 miles from Akron P. O. and railway station, on line of West Shore Ry.;  $\frac{1}{4}$  mile from school; 2 miles from churches of all denominations; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from condensing plant. Highway, level, chiefly State road. Nearest city, Buffalo, population 423,715, reached

by rail. General surface of farm, level. Altitude, 800 feet. Nature of soil, gravel and loam. Acres in timber 19; acres tillable, 100. Fruit, 2 acres apple orchard, 85 trees, winter varieties, 4 pear, 15 cherry, 9 plum, 9 peaches, 6 grapes. Best adapted to corn, wheat, beans, potatoes, cabbage and hay. Fences, wire, good condition. House, frame,  $1\frac{1}{2}$  stories, 10 rooms, 5 bed rooms, veranda, good cellar. Outbuildings, 38x50; horse barn, 32x40; hen house, hog house, tool house. Watered, house, by 4 springs; fields, by stream. Occupied by owner. Price, \$7,500. Terms, cash \$2,500, mortgage \$5,000 at 6%. Address G. A. Waterstraw, owner, R. D., Akron, N. Y., or Chas. C. Grein, agent, 200 Pearl St., Buffalo, N. Y.

## TOWN OF NORTH COLLINS

Population 2,424

No. 443.—Farm of 62 $\frac{1}{2}$  acres; located 1 mile from Langford P. O.; 6 miles from railway station at North Collins, on line of Erie Ry.; 1 mile from school; 1 mile from churches, Methodist, Catholic and Presbyterian. Highway, level, good. Nearest village, North Collins, population 964, reached by highway. General surface of farm, level. Altitude, 1,250 feet. Nature of soil, muck, gravel and loam. Acres in timber, 15; acres tillable, 35. Fruit, 4 acres apple orchard, 90 trees, all varieties, 5 pear and small fruit. Best adapted to oats, potatoes, hay and corn. Fences, all wire, in good condition. House, frame, 20x30, 2 stories, 10 rooms. Barn, 30x98, good condition; hog pen, 15x24; hen house, 10x30; granary, 14x18; sugar house, 12x15; all new. Watered, house, by wells; same in barn; fields, by spring and stream. Occupied by owner. Price, \$6,500. Terms,  $\frac{1}{2}$  cash. Saw mill  $\frac{1}{4}$  mile away, and adjoining farm has 4 large gas lines on it. Address Gerhard Fox, owner, North Collins, R. D. 1, Box 99, N. Y.

## TOWN OF SARDINIA

Population 1,644

No. 444.—Farm of 262 acres; located 3 miles from Sardinia P. O., on line of B. & S. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches. Highways, State road. Nearest village, Springville, population 2,246, 6 miles distant, reached by rail or highway. Surface of farm, mostly level. Altitude, 1,200 feet. Soil, gravelly loam. Acres in pasture, 35;

acres tillable, 225. Fruit, 100 apple trees, varieties, pears, cherries, plums and berries. Best adapted to corn, oats, potatoes and wheat. Fences, wire, in good condition. House, 20x24, with wing, 14 rooms,  $1\frac{1}{2}$  stories, in good condition. Outbuildings: basement barn, 40x100, new; hen house, hog house, wagon house, granary, tool house; tenant house, 24x30. Watered, house and barns by well, fields, by spring. Occupied by owner. Price, \$15,720. Terms, easy. Gasoline engine and all other equipment needed for modern farm included in price. Address Clifford Mercier, owner, Sardinia, N. Y.

No. 445.—Farm of 181 acres; located 4 miles from Sardinia P. O.; 3 $\frac{1}{2}$  miles from railway station at Sardinia, on line of Pennsylvania and B. & S. R. Rs.; school on farm; 4 miles from churches of all denominations. Highways, State road, partly hilly. Nearest village, Arcade, population 1,294, 6 miles distant, reached by rail or highway. Surface of farm, mostly level. Altitude, 1,200 feet. Soil, gravel and part loam. Acres in timber, 30. Acres tillable, 151. Fruit, 100 apple trees, a few pears and plums. Best adapted to all farm crops. Fences, wire, in fair condition. House, frame,  $1\frac{1}{2}$  stories, 10 rooms. Outbuildings, barn, 30x45, with basement; horse barn, 34x36; store building with living room attached; hog house, hen house. Watered, house by well, barns by running water. Occupied by tenant. Price, \$7,000. Terms, \$3,500 cash, balance on time. Address Chris. Stevenson, owner, Chafee, N. Y., or Chas. C. Grein, agent, 200 Pearl St., Buffalo, N. Y.

No. 446.—Farm of 208 acres; located 3 $\frac{1}{2}$  miles from Chafee P. O. and railway station, on line of Penna. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from Protestant church; 3 miles from butter factory; 3 miles from cheese factory and milk station. Highways, State road. General surface, nearly level, general slope to the east. Altitude, 850 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; in natural pasture, 20; in timber, 50, practically all hardwood saw timber. Acres tillable, 148. Fruit, 30 trees, fall and winter varieties, grapevines, some berries. Best adapted to potatoes and general crops. Fences, wire, in good condition. House, frame,  $1\frac{1}{2}$  stories, 9 rooms, fair condition. Outbuildings: basement barn, 30x70; poul-

try house, hog house and tool house, fair condition. House watered by well, barns, by well and spring, fields, by stream and spring. Occupied by owner. Reason for selling, desires to go into fruit farming. Price, \$7,600. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Albert Jenkins, owner, Chafee, N. Y.

No. 447.—Farm of 158 acres; located 2 miles from Sardinia P. O. and railway station on the B. & S. R. R.;  $1\frac{1}{2}$  miles from school and two miles from churches; 2 miles from butter, cheese, and milk factory and condensing station. Milk collected at door. Highways, State road. General surface of farm, level. Altitude, 1,200 feet. Nature of soil, loam. Acres in pasture, 10; in timber, 8. Acres tillable, 140. Fruit, 70 apple trees, pear, cherries, plums and currants. Best adapted to oats, potatoes, corn and hay. Wire fences, in fine condition. New frame house, 24x24, with wing, 2 stories, 10 rooms. Outbuildings: barn, 42x90; hog and hen house, 10x20; wagon house, 30x60; granary, 10x20, all in good condition. House and barns piped from spring and stream; fields watered by spring and streams. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$9,000. Terms, fair payment, balance on mortgage at 5%. Address R. M. Hopkins, owner, Sardinia, N. Y.

No. 448.—Farm of 167 acres; located  $1\frac{1}{2}$  miles from Sardinia P. O. and railway station on the B. & S. R. R.; 1 mile from school and  $1\frac{1}{2}$  miles from churches. Nearest city, Buffalo, population 423,715, distant 30 miles, reached by rail or highway. General surface, part rolling, balance level. Altitude, 1,200 feet. Nature of soil, gravel. Acres in timber, 42. Acres tillable, 125. Three acres of apple orchard, 80 trees, all varieties; pears, cherries, plums, grapes and berries. Best adapted to oats, corn, potatoes, wheat and hay. Fences, wire, good condition. House, frame, 17 rooms, veranda and good cellar; could be used for two families. Outbuildings: barn 110 feet long with basement; horse barn, hen house, wagon house and silo, 16x30 feet. House and barn watered by drilled well and springs; fields, by streams. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$12,000. Address H. R. Hopkins, owner, Sardinia, N. Y.

## TOWN OF WALES

Population, 1,203

No. 449.—Farm of 180 acres; located  $\frac{1}{2}$  mile from Wales Center P. O.;  $2\frac{1}{2}$  miles from railway station at East Aurora, on line of Pennsylvania R. R.;  $2\frac{1}{2}$  miles from school; 1 mile from churches of all denominations. Highways, State road. Nearest city, Buffalo, population 423,715, distant 17 miles, reached by rail and State road. General surface of farm rolling. Altitude, 1,000 feet. Nature of soil, mostly gravel. Acres in timber, 15. Acres tillable, 150. Fruit, 20 trees, general varieties of all kinds of small fruit for family use. Best adapted to hay, potatoes, grain and dairying. Fences, wire, good condition. House, large frame, 2 stories, 15 rooms, veranda, cellar. Outbuildings, barn, 101x41, basement for cows; hay barn, 30x36; shed, 30x36; horse barn, 30x50; hen and hog house, 30x36; tenant house, 10 rooms, large cellar; 2 silos, 16x24. Watered, house, by springs. Occupied by owner. Price, \$18,000. Terms,  $\frac{1}{2}$  down if possible. Fine woods on farm; many springs. Spring water to barns. Very good dairy farm. Address Henry Blocher, owner, Wales Center, N. Y., or Chas. Grein, 200 Pearl St., Buffalo, N. Y.

No. 450.—Farm of 60 acres; located 4 miles from South Wales P. O. and railway station, on line of Pennsylvania R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Milk taken at door. Highways, good, rather hilly. Nearest city, Buffalo, population 423,715, reached by rail or highway. General surface of farm, rolling. Altitude, 1,000 feet. Nature of soil, yellow loam; 13 acres woodland. Acres tillable, 47. Fruit, 24 trees, general varieties. Best adapted to potatoes, grain, hay. Fences, wire, in good condition. House, frame, 2 stories, 10 rooms; main 14x22, wing 18x20, veranda, half cemented cellar. Barn, new 34x54 with basement, wagon shed, hen and hog house in one; silo, round, 14x25. Watered, house, by dug well; barns, by springs. Occupied by owner. Reason for selling, wants larger farm. Price, \$4,200. Terms,  $\frac{1}{2}$  cash, or all if possible. This place is well located and is a good dairy farm. Address Will G. Hememan, owner, Wales, R. F. D., N. Y.

## ESSEX COUNTY

Area, 1,926 square miles. Population, 33,458. Annual precipitation, 35.41 inches. Annual mean temperature, 46.8°. Number of farms, 2,274. County seat, Elizabethtown.

This county is located in the northeastern part of the State.

It is by far the most broken and mountainous section of the state, with the exception of a strip of land lying along the shore of Lake Champlain. Nearly the whole county is of an Alpine character. Among these mountains are immense beds of magnetic iron ore. Other minerals interesting to science are found in abundance. Lake Champlain and Lake George lie partly in the county. These lakes with the Champlain canal, the Hudson, Saranac and Raquette rivers form a convenient outlet for the large amount of logs, lumber and mineral products of the county. There is also an outlet for everything marketable on the north by the way of the Richelieu and St. Lawrence rivers.

Only about one-third of the area of the county is in farms and only about one-eighth improved farms, yet there is a remarkably good report of agricultural production, showing that the tillable land must be very productive. The average price of improved farm lands, including buildings, is \$24.71 per acre. The leading crops of the county are corn, 96,383 bushels; oats, 222,971 bushels; barley, 9,395 bushels; buckwheat, 25,197 bushels; potatoes, 269,319 bushels; hay and forage, 50,479 tons. The number of domestic animals reported on 2,139 farms are dairy cows, 10,634; horses, 5,907; swine, 4,949; sheep, 19,814; poultry, 61,169. The production of milk was 4,976,712 gallons, the total receipts for the sale of dairy products, \$303,933. There are 164 district schools and the same favorable condition exists in regard to churches of all denominations. There are 14 agricultural organizations in the county all interested in the promotion of agricultural matters. The county has 100 miles of State and county roads and 1,069 miles of other improved highways. A smaller per cent. of the farms of Essex county are mortgaged than in any other county of the State.

## TOWN OF CHESTERFIELD

Population 1,829

No. 451.—Farm of 150 acres; located 1 mile from Keeseville P. O., R. D. 1; 1¼ miles from railway station at Keeseville, on line of K. A. & L. C. R. R.; ½ mile from school; 1¼ miles from Catholic and Protestant churches; 1½ miles from milk station; 6 miles from cheese factory. Highways, good. Surface of farm, slightly rolling to the east. Altitude, 400 feet. Soil, black, gravelly loam. Acres in meadow, 35; in natural pasture, 25; in timber, 25, pine and mixed hard wood. Acres tillable, 100. Fruit, apples, pears, cherries and plums. Adapted to all crops grown in this climate. Fences, wire and wood. House, 40x25, with wing and wood shed attached, good condition. Outbuildings, 2 barns, 30x40; 2 sheds attached, good condition. Water piped from spring to house and barns; brook runs through fields. This farm is ½ mile to Ausable River, 2¼ miles to Auger Lake and 3 miles to Lake Champlain. Occupied by owner. Reason for selling, advanced age of owner. Price, \$7,000. Terms, one-half down, balance on mortgage. Address Peter H. Ricketson, owner, Keeseville, N. Y.

## TOWN OF ELIZABETHTOWN

Population 1,108

No. 452.—Farm of 150 acres; located 1 mile from Elizabethtown P. O.; 8 miles from railway station at Westport, on line of D. & H. R. R.; 1 mile from school and churches; 8 miles from butter factory and milk station. Highways, in good condition. Surface of farm, smooth and level. Soil, loam and sand. Acres in meadow, 50; in natural pasture, 100. Acres tillable, 100. Best adapted to potatoes and corn. Fences, wire, good. Small house. Plenty of good barns, in good condition. Water in house and barn; fields watered by brook. Unoccupied. Reason for selling, owner wants to give up farming. Price, \$4,500. Terms, cash. Address M. C. Stauter, owner, Elizabethtown, N. Y.

## TOWN OF LEWIS

Population 937

No. 453.—Farm of 250 acres; located 3 miles from P. O.; 12 miles from railway station at Westport, on line of D. & H. R. R.; ½ mile from school and churches; 12 miles from butter factory and milk station. Highways, in fair condition. Soil, sandy. Acres in meadow, 50; in natural pasture, 75; in

timber, 125, mostly hard wood. Best adapted to potatoes and corn. Fences, American wire and rail. House, in good condition. Barns, in fair condition. Watered by well. Occupied by owner. Price, \$2,000. Terms, cash. Address Chas. P. McMurtey, owner, Elizabethtown, N. Y.

#### TOWN OF WILLSBORO

Population 1,580

No. 454.—Farm of 80 acres; located 2 miles from Willsboro P. O. and railway station, on line of D. & H. R. R.; 2 miles from high school; 2 miles from churches; 2 miles from butter factory and milk station. Highways, good. General surface, level. Nature of soil, black loam. Acres that can be used as meadow, 75; in natural pasture, 5, some

pine trees at one end of farm. Acres tillable, 75. Fruit, young orchard of 100 apple trees, 75 trees in old orchard, 6 pear, 6 plum trees, and some grapes. Best adapted to potatoes, corn, oats, buckwheat and barley. Fences, stone wall, rail, woven wire, all in excellent condition. House, 1½ stories, with wing, hardwood floors, etc., good condition. Outbuildings: large ice house, barn 30x40, horse barn, carriage house with concrete floor and underground stable for 8 cows. House, watered by well; barns, by well; fields, by spring and well. Occupied by owner. Reason for selling, ill health. Price, \$6,500. Terms, \$2,000 cash, balance on mortgage. Address Asa J. Fisk, owner, Plattsburg, N. Y., or Agnew & Agnew, Brokers, Plattsburg, N. Y.

### FRANKLIN COUNTY

Area, 1,718 square miles. Population, 45,717. Annual precipitation, 37.16 inches. Annual mean temperature, 43.3°. Number of farms, 3,675. County seat, Malone.

This county ranks fourth in land area, and is situated on the north line of the State bordering on Canada.

Its surface is mostly level in the northern part, undulating and rolling in the center and broken and mountainous in the eastern portion. There are many streams in the northern part of the county affording abundance of water for the farming section and in the southern and mountainous portion of the county is a large number of lakes, some of them several miles in extent. Dairying is carried on to a large extent in the northern part. There is a large amount of timber in the central and southern portion. The farm valuation is placed at \$17,571.27, a gain of 37.5 per cent. over that of 1900. The average price per acre of improved farm land including buildings is \$32.50. The principal crops raised are corn, 144,646 bushels; oats, 756,302 bushels; wheat, 10,142 bushels; barley, 62,709 bushels; potatoes, 1,433,761 bushels; hay and forage, 107,630 tons. The county ranks high in the production of barley and potatoes. The number of domestic animals reported are as follows: Dairy cows, 28,964; horses, 9,262; swine, 12,893; sheep, 5,233; poultry, 98,495; milk production, 12,715,196 gallons and total receipts from dairy products, \$1,135,644. There are 99 district schools, many churches of all denominations and 14 agricultural organizations, one dairymen's association, one agricultural society and one county fair association. This county has 40 dairy stations and factories. The hardier kinds of apples are grown in abundance and the fruits are easily cultivated. There are ample facilities for marketing. The St. Regis Indians have a reservation of 24,000 acres in the northwest corner of the county.

#### TOWN OF ALTAMONT

Population 4,691

No. 455. Farm of 5 acres; located 1¼ miles from Tupper Lake P. O.; 1¼ miles from railway station at Tupper Lake, on line of N. Y. & O. R. R.; 1½ miles from school, Methodist, Episcopal and Catholic churches. Highways, macadamized, good. Nearest village, Tupper Lake, population 3,067, 1¼ miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,600 feet. Soil, rich. Acres tillable, 5. Fruit,

9 apple trees, 200 gooseberry and currant bushes, 1 acre of strawberries. Adapted to all kinds of truck gardening. Fences, wire. House, 7-room bungalow, 26x38, fine cellar. Small barn, hen house, 12x36, and cow shed. Watered, house, by well. 100 rods to Raquette River; 3 miles to Tupper Lake. Surrounded by mountains. House is 7 years old, in fine condition: piazza, 10x30; good fishing and deer hunting near. Occupied by owner. Reason for selling, advanced age of owner. Price,



ALFALFA — SECOND CUTTING ON JULY 20TH.  
The soil in many sections of New York State is particularly adapted to alfalfa.





\$4,500. Terms, cash preferred but will sell for one-half cash, balance on bond and mortgage. Address C. C. Miller, owner, Tupper Lake, N. Y.

## TOWN OF BANGOR

Population 1,046

No. 456.— Farm of 48½ acres; located 2½ miles from West Bangor P. O., R. D. No. 2; 7 miles from railway station at North Bangor, on line of Rutland R. R.; 1½ miles from school; 2½ miles from churches and 6 miles from condensing plant. Highways, good. Nearest city, Malone, population 10,154, 10 miles distant, reached by highway. General surface, level. Nature of soil, heavy. Acres that can be used as meadow, 25; in natural pasture, 23. Acres tillable, 20. Fruit, 20 apple trees. Best adapted to grain, corn, hay and potatoes. Fences, mostly woven wire. House, 22x52, with wood shed attached. Outbuildings, barn 90x36, also silo. House watered by well, barns, by well, fields, by spring. Occupied by owner. Reason for selling, other business. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage; easy. Good poultry house 20x50, concrete floor and large yard. Address Mrs. Lizzie Hutchins, owner, North Bangor, N. Y.

## TOWN OF BOMBAY

Population 2,588

No. 457.— Farm of 248 acres; located 3 miles from Bombay P. O., R. D. No. 1, and railway station, on line of Grand Trunk R. R.; ½ mile from school; 3 miles from churches; 3 miles from butter factory and milk station. Nearest city, Malone, population 10,154, 20 miles distant, reached by rail or State road. General surface, level. Altitude, 300 feet. Nature of soil, gravel and clay. Acres in meadow, 200; in pasture, 18; in timber, 30, oak, elm and maple. Acres tillable, 200. Fruit, 25 young apples. Best adapted to hay, oats and corn. Fences, wire and rail, good condition. House, 10 rooms, in good condition. Outbuildings, 3 barns, 30x40; horse barn; ice house; new milk and separator house. House watered by well and cistern; barns, by well and spring; fields, by brook and spring. Occupied by administratrix. Reason for selling, to settle estate. Price, \$12,000. Terms, \$2,000 cash, and good security. Address Mary F. O'Brien, administratrix, Bombay, N. Y.

## TOWN OF BRANDON

Population 872

No. 458.— Farm of 46 acres; located 1½ miles from Skerry P. O., R. D. 4; 7 miles from railway station at Bangor, on line of Rutland Ry.; 1¼ miles from school and Protestant church; 1½ miles from butter factory and milk station; 4½ miles from cheese factory; 7 miles from milk condensing plant. Highways, in good condition. Nearest large village, Malone, 9 miles distant, reached by highway. Soil, loam. Acres in meadow, 14; in natural pasture, 30; in timber, 2, hard wood, second growth. Acres tillable, 14. 12 fruit trees. Best adapted to corn, potatoes and hay. Fences, wire, good condition. House, 16x24, ell, 12x16, good condition. Outbuildings, barn, 24x26, with lean-to, 16x24; hen house, 12x25, new. Watered, house and barn, by well; fields, by Little Salmon River. Occupied by owner. Price, \$1,200. Terms, one-half down, balance on time. Address Jas. Whitcomb, owner, North Bangor, N. Y., R. D. 4.

## TOWN OF BRIGHTON

Population 741

No. 459.— Farm of 800 acres; located 7 miles from Paul Smiths railway station, on line of N. Y. C. R. R.; post-office in house; ¼ mile from school; 6 miles from churches. Highways, State road. Nearest city, Malone, population 10,154, reached by highway or rail. General surface, level. Altitude, 1,600 feet. Nature of soil, sandy loam. Acres in meadow, 200; in pasture, 200; in timber, 400, maple, beech, spruce, hemlock, pine and balsam. Acres tillable, 200. Best adapted to potatoes, oats and hay. Fences, wire. House, 30 rooms, good condition. Outbuildings, barn, 40x80; corn house, 30x50; shed for sheep; hog house; poultry house; all buildings in good condition. House watered by running water; barns, by running water; fields, by springs and brook. Osgood River, Rice Pond, on edge of farm. Occupied by tenant. Reason for selling, to settle estate. Price, \$40,000. Terms, cash. Address C. A. McArthur, owner, Saranac Lake, N. Y.

No. 460.— Farm of 92½ acres; located ¾ mile from Gabriels P. O. and railway station on line of N. Y. C. R. R.; ¼ mile from school; 2 miles from churches. Nearest village, Saranac, popu-

lation 4,983, reached by rail and State road. General surface, level. Altitude, 1,630 feet. Nature of soil, sandy loam. Acres in meadow, 70; in timber, 22½, maple, beech, spruce and balsam. Acres tillable, 70. Fruit, 25 apple trees. Best adapted to hay, oats and potatoes. Fences, wire. House, 9 rooms, fine condition. Outbuildings, 40x60, 30x40; poultry house, hog house. House and barns watered by well and cistern; fields, by springs. Occupied by owner. Reason for selling, has other business. Price, \$3,500. Terms, ½ cash, balance in three years. Address Charles J. Riley, owner, Gabriels, N. Y. Will rent.

#### TOWN OF BURKE

Population 1,772

No. 461.—Farm of 125 acres; located 6 miles from Burke P. O., R. D. 1, and railway station, on line of Rutland R. R.; 1 mile from school and churches; 4 miles from butter factory and 6 miles from milk station. Highways, good. Nearest village, Burke, distance 6 miles, reached by highway. General surface, level. Altitude, 800 feet. Nature of soil, gravel. Acres that can be used as meadow, 40; in pasture, 60; in timber, 25, maple and birch. Acres tillable, 60. Fruit, 25 trees of different varieties. Best adapted to corn and hay. Fences, fair. House, 26x30, and ell, 18x24, good condition. Outbuildings: barn, 40x50, good condition; hog pen, 14x20, with concrete floor, good condition, granary and wood shed, 26x40. House watered by well, barns, by well, and fields, by brook. Occupied by owner. Reason for selling, wishes to engage in other business. Price, \$4,000. Terms, \$1,000 down, balance on mortgage for 10 years. Address Myron N. Badger, owner, R. F. D. No. 1, Burke, N. Y.

No. 462.—Farm of 100 acres; located 5 miles from Burke P. O., R. D. No. 2, and railway station, on line of Rutland R. R.; 1 mile from school, church and butter factory and 5 miles from milk station. Highways, good. Nearest village, Burke, 5 miles distant, reached by highway. Altitude, 700 feet. Acres that can be used as meadow, 50; in natural pasture, 50. Acres tillable, 50. Fruit, 30 trees of different varieties. Best adapted to hay and grain. Fences, fair. House, 28x34, fair condition. Outbuildings: barns 30x40, not in very good condition. House, barns and fields watered by well. Occu-

pled by tenant. Price, \$3,000. Terms, \$1,000 down, balance on mortgage. Address Fred A. Wood, owner, R. F. D. No. 2, Burke, N. Y. Owner will rent.

No. 463.—Farm of 157 acres, located 4 miles from Burke P. O., R. D. No. 2, and railway station, on line of Rutland R. R.; ½ mile from school; ½ mile from Protestant church; 2 miles from butter factory and 4 miles from milk station. Highways, good. Nearest village, Burke, 4 miles distant, reached by highway. General surface, level. Altitude, 750 feet. Nature of soil, clay loam. Acres that can be used as meadow, 50; in natural pasture, 75; in timber, 32, 15 acres of maple and 17 acres of basswood. Acres tillable, 70. Fruit, 80 trees of different varieties. Best adapted to hay, oats and corn. Fences, in fair condition. House, 26x36, in fair condition. Outbuildings: barn, 30x92, concrete floor, good condition; tool shed and poultry house, 100x14, in good condition. House and barns watered by well, fields by spring and brook. Occupied by owner. Reason for selling, poor health. Price, \$6,500. Terms, \$1,500 down, balance on mortgage. Address Merton J. Wood, owner, R. D. No. 2, Burke, N. Y.

No. 464.—Farm of 180 acres; located 4 miles from Constable P. O., R. D. No. 1, and railway station, on line of N. Y. C. R. R.; 1 mile from school; 3 miles from churches; 2 miles from butter factory; 6 miles from milk station. Nearest village, Constable, population 400. Highways, good. General surface, rolling. Altitude, 800 feet. Nature of soil, gravel and loam. Acres in meadow, 50; in pasture, 60; in timber, 40, maple, birch and elm. Best adapted to hay and corn. Fences, fair. House, 24x30, fair condition. Barn, 26x40, with wing for stable. House and barn watered by wells, fields, by springs. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,000. Terms, \$1,000 down, balance on mortgage for 15 years. Address Fred R. Badger, owner, Burke, N. Y.

No. 465.—Farm of 100 acres; located 3 miles from Burke P. O., R. D. No. 2, and 3 miles from railway station, on line of Rutland R. R.; ½ mile from school; 1 mile from church; ¼ mile from butter factory and 3 miles from milk station. Highways, good. Nearest village, Burke, 3 miles distant, reached by highway. General surface, level.

Altitude, 700 feet. Nature of soil, clay loam. Acres that can be used as meadow, 100. Acres tillable, 100. Fruit, 25 trees, different varieties. Best adapted to hay and grain. Fences, good. House, 24x30, with ell, good condition. Outbuildings: 3 barns, 30x40, fair condition. House, barns and fields watered by well. Occupied by owner. Reason for selling, wishes to retire. Price, \$8,000. Terms, \$2,000 down, balance on mortgage. Address Thomas Tassie, owner, Burke, N. Y.

No. 466.— Farm of 125 acres; located 2 miles from Burke P. O., R. D. No. 2, and railway station, on line of Rutland R. R.; 1 mile from school; 2 miles from church; 1 mile from butter factory and 2 miles from milk station. Highways, good. Nearest village, Burke, 2 miles distant, reached by highway. General surface, level. Altitude, 700 feet. Nature of soil, loam. Acres in meadow, 76; in natural pasture, 50. Acres tillable, 100. Fruit, 25 trees of different varieties. Best adapted to hay and grain. Fences, fair condition. House, 26x36, and ell, in good condition. Barn, 30x50, fair condition, and one, 30x40, good condition. House and barns watered by well and fields, by well. Reason for selling, other business. Price, \$5,500. Terms, \$1,500 down, balance on mortgage. Address Daniel M. Tolan, owner, Burke, N. Y.

## TOWN OF DICKINSON

Population 1,600

No. 467.— Farm of 196 acres; located  $\frac{1}{2}$  mile from Dickinson Center P. O., R. D. 2, and  $\frac{1}{4}$  mile from railway station, on line of N. Y. & O. R. R.;  $\frac{1}{2}$  mile from school and churches; 1 mile from butter factory. Highways, in good condition. Nearest large village, Malone, population about 6,467, 17 miles distant, reached by rail and highway. Surface of farm, part level and part rolling. Soil, loam muck. Acres in meadow, 50; in natural pasture, 90; in timber, 33, about 2,000 sugar maples. Acres tillable, 50. Fruit, 50 apple trees. Best adapted to corn, oats, barley, hay and potatoes. Fences, wire, rail and wall. Large house, 16 rooms, bath, good condition. Outbuildings, 3 barns, 1 large shed, granary, new silo 14x29, all in good condition. Watered, house, by 2 cisterns; barns, by well; fields, by spring and brook. Occupied by owner. Fine trout brook runs through farm. For

price and terms, address Chas. D. Bacon, owner, Dickinson Center, N. Y. Owner will rent on shares or with option to buy.

## TOWN OF MALONE

Population 10,154

No. 468.— Farm of 85 acres; located 1 mile from Malone P. O., R. D. No. 1, and railway station, on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches; 1 mile from butter factory and 1 mile from milk station. Highways, hilly. State road under construction. General surface, hilly and level. Altitude, 700 feet. Part heavy and part light soil. Acres that can be used as meadow, 45; in natural pasture, 29; in timber, 11, mostly hard wood. Acres tillable, 40. Fruit, enough for family use. Best adapted to potatoes and corn. Fences, wire, poor condition. House,  $1\frac{1}{2}$  stories, fair condition. Outbuildings, barn 30x40, corn crib, small horse barn, sheds, all in fair condition. House has village water; barns watered by spring and brooks; fields, by spring and brook. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, \$1,000 cash, balance on mortgage. Address Mrs. Charles Sabin, owner, Malone, N. Y.

No. 469.— Farm of 122  $\frac{4}{10}$  acres; located  $2\frac{1}{2}$  miles from Malone P. O.; 3 miles from Malone railway station; on line of N. Y. C. and M. & M. R. Rs.; 1 mile from school; 3 miles from churches; 1 mile from butter factory, and 3 miles from milk station. Highways, good. General surface, slightly rolling. Nature of soil, part sand and part black. Acres that can be used as meadow, 85; in natural pasture, 37; in timber, enough for own use. Acres tillable, 85. Best adapted to all kinds of crops. Fences, Page wire, in good condition. No buildings, except a few sheep sheds. Buildings watered by springs. Adjoins Salmon river for  $\frac{1}{2}$  mile. Reason for selling, to settle estate. Price, \$1,000. Terms, \$250 cash, balance on mortgage. Address S. S. Shears, owner, 30 Church street, New York City. Owner will rent for \$100 per year.

No. 470.— Farm of 19 $\frac{1}{2}$  acres; located 7 miles from Malone P. O. and railway station, on line of N. Y. C. & H. R. R.;  $1\frac{1}{2}$  miles from church;  $3\frac{1}{2}$  miles from

butter factory, and 7 miles from milk station. Highways, hilly. Nearest village, Malone, population 6,467, 7 miles distant, reached by highway. General surface, rough. Altitude, 1,000 feet. Nature of soil, rich loam. Acres that can be used as meadow, 10; in natural pasture, 9. Fruit, a few trees of common varieties. Best adapted to potatoes and hops. Fences, rail, poor condition. House, 1½ story frame, good condition. Barn, 30x36, fair condition. House watered by well, barns, by well and fields, by brook. Occupied by owner. Reason for selling, other business. Price, \$650. Terms, cash. Address Albert Fayette, owner, Malone, N. Y., or A. B. Parmelee & Son, brokers, Malone, N. Y.

No. 471.—Farm of 70 acres; located 1½ miles from Malone P. O. R. D. No. 5 and railway station, on line of N. Y. C. and Rutland R. R.; 1 mile from school; ½ mile from butter factory, and 1½ miles from milk station. Highways, good. Nearest city, Malone, population 10,154, 1 mile distant, reached by highway. General surface, rolling. Altitude, 800 feet. Nature of soil, rich loam. Acres that can be used as meadow, 50; in natural pasture, 20. Acres tillable, 50. Fruit, variety. Best adapted to hay, grain, potatoes and hops. Fences, rail, fair condition. House, 2 stories, brick. 4 barns, all adjoining, good condition. House watered by spring, barns by spring, fields by spring and brooks. Occupied by owner. Reason for selling, other business. Price, \$10,000. Terms, part cash, balance on mortgage. Address Mrs. Maria Paddock, owner, R. D. No. 2, Malone, N. Y., or A. B. Parmelee & Son, brokers, Malone, N. Y.

No. 472.—Farm of 70 acres; located 4 miles from Malone P. O., R. D. No. 2, and 2 miles from railway station at Malone, on line of N. Y. C. R. R.; 1

mile from school; 4 miles from churches; 3 miles from butter factory, and 4 miles from milk station. Highways, good. General surface, rough. Altitude, 800 feet. Nature of soil, rich loam. Acres that can be used as meadow, 20; in natural pasture, 20; in timber, 15, mostly soft wood. Acres tillable, 35. Best adapted to potatoes and hops. Fences, rail, good condition. House, 1½ stories, 20x24. Large barn with concrete floor. House watered by well, barn, by well and fields by springs. Occupied by owner. Price, \$1,600. Terms, \$500 cash, balance on mortgage. Address John J. Bova, owner, R. D. 2, Malone, N. Y., or A. B. Parmelee & Son, brokers, Malone, N. Y. Owner will rent.

#### TOWN OF MOIRA

Population 2,346

No. 473.—Farm of 700 acres; located ¼ mile from Moira P. O.; ¾ mile from railway station at Moira, on line of Rutland R. R.; ¼ mile from school, churches and milk station; 2 miles from butter factory. Highways, new State road. Surface of farm, ½ rolling, ½ river bottom flats, overflowed annually. Altitude, about 600 feet. Soil, good. lime uplands, clay river bottom. Acres in timber, 60. Acres tillable, 350. Adapted to any crops grown in this climate. Fences, good. Large house, good condition. Outbuildings, large and in good condition. Watered by well and brook. A costly stone residence in the village would be sold with or without the farm and two together would make a fine country seat and fancy stock farm for wealthy gentleman. Occupied by tenant. Reason for selling, ill health. Price, \$35,000. Terms, \$15,000 down, balance on easy payments. Price includes 70 head of cattle, but not stone residence in village. Address Wm. S. Lawrence, owner, Moira, N. Y.

#### FULTON COUNTY

Area, 544 square miles. Population, 44,534. Annual precipitation, 50.62 inches. Annual mean temperature, 46.1°. Number of farms, 1,932. County seat, Johnstown. Located north of the Mohawk river, 45 miles west from Albany.

Its surface features are a rolling and hilly upland in the southern portion rising into a mountainous region in the north. In this part of the county are a large number of lakes forming a characteristic feature of the entire wilderness region of northern New York. The soil in the southern part and along the valleys is mostly a gravelly clay loam and is well adapted to pasturage and dairying, and in the more favorable localities produces excellent crops of grain. Manufacturing is carried on to

a large extent, especially in gloves and mittens. More of these commodities are manufactured in Gloversville, Johnstown and the vicinity than are made in all the remainder of the United States. In the northern portion of the county are large tracts of fine timber chiefly owned by the state, though, as in other mountain counties, private parties have holdings. There are ample facilities for marketing all manufactured and agricultural products. The total valuation of farm property is \$6,808,265. The average price of farm lands per acre including buildings is \$25.30. These figures show a slight increase in value over that given in 1900. The principal crops are corn, 121,209 bushels; oats, 218,517 bushels; buckwheat, 44,879 bushels; potatoes, 271,868 bushels; hay and forage, 50,479 tons. The number of farms reporting domestic animals is 1,741; dairy cows, 9,835; horses, 4,004; swine, 4,344; poultry, 67,193; milk produced, 4,533,935 gallons. Receipts from the sale of dairy products, \$383,131. There are nine milk stations and factories in the county. In the lower portion considerable quantities of apples and small fruits are raised. There are 99 district schools and five agricultural organizations. In the larger villages are high schools and academies. The county is noted for its salubrious climate and is the location to which a large summer population go. Sacandaga Park located on the river bearing its name is a noted summer resort.

## TOWN OF BROADALBIN

Population 1,845

No. 474.—Farm of 116 acres;  $\frac{1}{2}$  mile from Union Mills P. O.; 3 miles from Broadalbin. Soil, sandy loam, adapted to general farming. Watered by good springs. Price, \$800. Terms, part cash, balance on time. Address David Blair, owner, Broadalbin, N. Y.

No. 474 $\frac{1}{2}$ .—Farm of 40 acres; located  $\frac{3}{4}$  mile from Broadalbin P. O., R. D. 1;  $\frac{1}{2}$  mile from railway station at Broadalbin; on line of F., J. & G. R. R.; 1 mile from school;  $\frac{3}{4}$  mile from churches; 1 mile from cheese factory. Highway, good, level. General surface, level. Acres in meadow, 20; in timber, 20, butternut and hardwoods. Acres tillable, 20. Best adapted to general farm crops. Fences, wire, good. House, large, 2 stories. Outbuildings, 3 large barns, poultry house, hog house and corn house, nearly new. House and barns watered by two good wells; fields by creek. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Terms, \$2,000 cash, balance easy. Address Marvin W. Clifford, owner, Broadalbin, N. Y., R. D. No. 1, box 105.

## TOWN OF EPHRATAH

Population 1,312

No. 475.—Farm of 276 acres; located 1 mile from Garoga P. O.; 8 miles from railway station at Johnstown, on line of N. Y. C. R. R.; 1 mile from school and Methodist church; 3 miles from creamery. Highways, somewhat hilly, but in fair condition. Surface of farm, some hilly and rough, some level. Soil, some sandy, mostly black loam. Acres in meadow, 90; in natural pas-

ture, 40; in timber, 6, pine, hemlock, basswood, beech and maple. Acres tillable, 134. Fruit, apples, plums and berries. Best adapted to hay, oats, corn, buckwheat and barley. Fences in good condition. 10 room, 2 story house, main part, 40x30, with wing 25x40. Water and drain in house; closet inside. Outbuildings, barn, 40x60; barn, 25x40. Watered, house, by well, barns, by spring, fields, by small stream. Occupied by owner. Reason for selling, ill health of owner. Price, \$6,000. Terms, cash or good security. Address James Dorn, owner, Garoga, N. Y.

## TOWN OF MAYFIELD

Population 2,065

No. 476.—Farm of 100 acres; located  $1\frac{1}{2}$  miles from Mayfield P. O., R. D. 2 and railway station on the F., J. & G. R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from churches. Highway, good dirt road. Nearest city, Gloversville, population 20,642, 6 miles distant, reached by highway. General surface of farm, level. Altitude, 800 feet. Nature of soil, sand, gravel and muck. Acres in meadow, 50; in pasture, 20; in timber, 30, soft and hard wood. Acres tillable, 60. Fruit, 30 apple trees. Best adapted to hay and grain. Fences, wire. House,  $1\frac{1}{2}$  stories, 8 rooms. Outbuildings, barn, 28x30; barn, 30x40, new galvanized iron roof. House watered by well, barns, by creek, fields, by 2 creeks and springs. Adirondack mountains, 2 miles north. Occupied by owner, will give possession any time. Reason for selling, owner is in other business. Price, \$1,300. Terms, part cash, balance on mortgage. Address

Chas. D. Ferguson, owner, Mayfield, N. Y., or G. W. Haines, agent, Mayfield, N. Y.

No. 477.—Farm of 75 acres, located 2 miles from Mayfield P. O., R. D. 1 and railway station on line of F., J. & G. R. R.;  $\frac{1}{2}$  mile from school; two miles from churches; 2 miles from butter factory. Highway, good dirt road. Nearest city, Gloversville, population 20,642,  $6\frac{1}{2}$  miles distant, reached by macadam road. General surface of farm, slopes to the south. Altitude, 800 feet. Nature of soil, sand loam. Acres in meadow, 50; in pasture, 15; in timber, 4; acres tillable, 50. Fruit, 8 apple trees. Fences, of stone and wire. Two-story, 12 room house. Large barn with basement and tool house. House watered by well; barns, by spring; fields, by creek and springs. Adirondack mountains 4 miles distant. Reason for selling, death of owner. Price, \$2,000. Terms, part cash, balance on mortgage. Possession may be taken at any time. Address B. H. Dixon, owner, Mayfield, N. Y., or G. W. Haines, agent, Mayfield, N. Y.

No. 478.—Farm of 165 acres; located  $2\frac{1}{4}$  miles from Mayfield P. O., R. D. No. 1 and railway station, on line of F., J. & G. R. R.;  $\frac{1}{4}$  mile to railroad crossing where cars stop by flagging;  $\frac{1}{2}$  mile to school;  $2\frac{1}{4}$  miles from Protestant churches;  $3\frac{1}{2}$  miles from butter factory. Highways, good. Nearest city, Gloversville, population 20,642, 8 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 745 ft. Soil, clay, muck and some sand. Acres in natural pasture, 65; enough small timber for farm use. Acres tillable, 100. Fruit, a few apple trees. Best adapted to hay, grain and dairying. Fences, mostly wire. House,  $1\frac{1}{2}$  stories, good condition, tenant house, 8 rooms, good condition. Outbuildings, barn, 40x50; barn, 36x40; shed, 18x30; hen house, 11x20. Watered, house by well and cistern; barns, by well; fields, by two creeks. This farm is 3 miles from Adirondack Mountains. Occupied by owner. Reason for selling, owner desires to go into other business. Price, \$4,500. Terms, part down. Address George Gasnor, owner, Mayfield, N. Y., or G. W. Haines, agent, Mayfield, N. Y.

No. 479.—Farm of 100 acres; located 3 miles from Gloversville P. O., R. D. 3; 2 miles from trolley line of the F., J. & G. R. R.; 3 miles from milk station

and butter factory. Highway, state road. General surface, sloping south. Altitude, 800 feet. Acres tillable, 90; acres in timber, 10, hard and soft wood. Fruit, small apple orchard. Best adapted to dairying and hay. Fences, mostly wire. Large house. Outbuildings, large barns with basement. Photographs of house and barns may be had upon application. House and barns watered by running water and fields by creek and springs. Occupied by owner. May take possession any time. Reason for selling, owner wishes to retire. Price, \$8,000. Terms, part cash. Address Amos Christie, R. D. 3, Gloversville, N. Y., or G. W. Haines, Agent, Mayfield, N. Y.

No. 480.—Farm of 160 acres; located 3 miles from Gloversville P. O., R. D. 3 and railway station on the F., J. & G. R. R.; 1 mile from school and 2 miles from churches; 3 miles from butter factory and milk station. Highway, state road. General surface, slopes south. Altitude, 800 feet. Nature of soil, clay and heavy loam. Acres in meadow, 100; in timber, 20, hard and soft wood. Acres tillable, 100. Fruit, small apple orchard. Best adapted to hay and grain. Fences, wire and stone. Large brick house. Outbuildings, 3 large barns, newly painted, all in good condition. Running water in house and barns, and fields watered by creek and spring. Occupied by owner. Reason for selling, owner wishes to retire. Price \$12,000. Terms, part cash. Address Amos Christie, owner, R. D. 3, Gloversville, N. Y., or G. W. Haines, agent, Mayfield, N. Y.

No. 481.—Farm of 90 acres; located  $\frac{3}{4}$  mile from Mayfield P. O., R. D. No. 1 and railway station, on line of F., J. & G. R. R.;  $\frac{3}{4}$  mile from school; 3 miles from two Protestant churches. Highways good. Nearest city, Gloversville,  $6\frac{1}{2}$  miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 745 ft. Soil, heavy loam. Acres in natural pasture, 15; in timber, 5, hardwood. Acres tillable, 75. Fruit, about 12 apple trees. Best adapted to dairying. Fences, wire, some stone walls. House, 2 stories, 12 rooms, good condition. Outbuildings, large barn with basement; horse barn; wagon house; hog house and hen house. Watered, house by well and cistern; barn by running water; fields, by spring and creek. This farm is 3 miles from Adi-

rondack Mountains. Reason for selling, death of owner. Price, \$4,000. Terms to suit purchaser. Address Stewart Christie, owner, Mayfield, N. Y., or G. W. Haines, agent, Mayfield, N. Y. Owner will rent.

## TOWN OF NORTHAMPTON

Population 2,228

No. 482.—Farm of 70 acres;  $1\frac{1}{2}$  miles from P. O. and Sacandaga Park;  $\frac{1}{2}$  mile from school. Good sandy loam soil. Ten acres timber; balance meadow and pasture. Fences, mostly wire. Young apple trees in bearing and small fruits. House, 36x26, with large wing; piazza on front and one end; all in fairly good condition; well shaded by maples. Barns, 30x40, and 26x36. Water at house and barn. This farm would make an ideal summer boarding house or summer home. It is the first place outside the village limits. Will sell all or part of the land to suit buyer. Price, including all farm tools, \$1,800. Name and address of owner, M. B. Merrill, Northville, N. Y.

No. 483.—Farm of 100 acres, located 1 mile from Sacandaga Park, P. O., R. D. No. 2, and railway station, on line of F., J. & G. R. R.; 1 mile from school; 2 miles from churches. Highways, improved dirt road. Nearest city, Gloversville, population 20,642, 15 miles distant, reached by rail and highway. General surface slopes to south. Altitude, 800 feet. Nature of soil, sand loam. Acres that can be used as meadow, 60; in natural pasture and timber, 40, hard and second growth of pine. Acres tillable, 60. Fruit, 250 apple trees. Best adapted to poultry and garden truck. Fences, mostly board. House,  $1\frac{1}{2}$  stories, just repaired. Barns just repaired. House and barns watered by well, fields, by spring. Adirondack mountains back of house, Sacandaga Park 1 mile distant. Occupied by tenant. Reason for selling, other business. Price, \$1,500. Terms, part cash, balance on mortgage. Address Edward Hall, owner, Mayfield, N. Y., or G. W. Haines, broker, Mayfield, N. Y. Owner will rent.

## TOWN OF OPPENHEIM

Population 1,241

No. 484.—Farm of 140 acres;  $2\frac{1}{2}$  miles from Lassellsville P. O., R. D. 2;  $5\frac{1}{2}$  miles from railway station at St. Johnsville, on line of N. Y. C. & H. R. R.; 2 miles from school; 5 miles from condensing plant. Highways, State road.

Nearest village, St. Johnsville, population 2,536, reached by highway. Surface of farm, hilly. Soil, sandy loam. Acres in meadow, 40; in natural pasture, 75; in timber, 25, cedar; acres tillable, 40. Best adapted to corn, potatoes, oats. No buildings. Watered, house by well; barns, by spring; fields, by creek. Reason for selling, to close an estate. Price, \$1,000. Terms, cash. Name and address of owner, Harwood Dudley, Johnstown, N. Y. Owner will rent for cash or on shares.

No. 485.—Farm of 105 acres; located 5 miles from St. Johnsville P. O., R. D. 3; 5 miles from railway station at St. Johnsville, on line of N. Y. C. & H. R. R. R.;  $\frac{1}{2}$  mile from school and Methodist church; 4 miles from cheese factory; 5 miles from milk station and condensing plant. Highways, good. Nearest village, St. Johnsville, population, 2,536, 5 miles distant, reached by highway. Surface of farm, level. Altitude, 1,075 feet. Soil, muck and clay. Acres in meadow, 85; in natural pasture, 20; in timber, 5; acres tillable, 100. Fruit, 100 apple, 25 plum, and 15 pear trees, also 10 butternut trees. Best adapted to hay, grain and potatoes. Fences, wire, cedar posts, in first-class condition. House, main, 30x40, wing, 30x20, wing 30x18, in first-class condition. Barn, main, 75x45; wagonhouse, 30x25; barn, 40x25; ice-house, silo 14x30, and chicken house, good condition. Watered, house, by well and spring; barn, by spring; fields, by running water, brooks and ponds. Near Mohawk river and Canada lakes. One of the best hay producing farms in the Mohawk valley. Occupied by owner. Reason for selling, owner intends engaging in other business. Price, \$5,000. Address John W. Vaughan, owner, St. Johnsville, N. Y.

No. 486.—Farm of 200 acres, 4 miles from Middle Sprite P. O., R. D. 1; 5 miles from railway station at Dolgeville, on line of Dolgeville & Little Falls R. R.; 2 miles from school and Methodist and Catholic churches; 6 miles from milk station and condensing plant. Highways, hilly. Nearest village, Dolgeville, population 2,685, reached by highway. Surface of farm, hilly. Soil, light sandy loam. Acres in meadow, 75; in natural pasture, 100; in timber, 25, hardwood; acres tillable, 100. Fruit, apples. Best adapted to grain. Fences, not good. Well water and creek. Fair barn. Adirondack mountains and Canada lakes

near. Reason for selling, to close an estate. Price, \$1,000. Owner will rent for cash, on shares or with option to buy. Address Amanda K. Swartwork, owner, Johnstown, N. Y., or Harwood Dudley, agent, Johnstown, N. Y. Owner will rent.

No. 487.—Farm of 200 acres; located 3 miles from Dolgeville P. O., R. D. and railway station on line of Little Falls & Dolgeville R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches; 3 miles from butter factory;  $\frac{1}{2}$  mile from cheese factory; 3 miles from milk station. Highways, good. Nearest village Dolgeville, population 2,685. Reached by State road.

General surface, rolling. Nature of soil, loam. Acres in meadow, 70; in pasture, 60; in timber, 70, hardwood and hemlock. Acres tillable, 110. Fruit, 100 apple trees. Best adapted to corn, wheat, oats and potatoes. Fences, wire, in good condition. House, 40x30, good condition. Outbuildings, basement barn 50x40, wagon house, shed and poultry house, all in good condition. House watered by well and cistern, barns, by well and running water, fields, by creek. Occupied by owner. Reason for selling, in other business. Price \$3,000. Terms, easy. Address John A. Cross, owner, Dolgeville, N. Y.

### GENESEE COUNTY

Area, 507 square miles. Population, 37,616. Annual precipitation, 34 inches. Annual mean temperature, 50°. Number of farms, 3,250. County seat, Batavia.

Located in the upper western part of the state.

The surface is mostly level or gently rolling and undulating. The southern part is occupied by ranges of hills, which have an elevation of 200 or 300 feet above the valley. A limestone terrace extends east and west through the county and building stone is extensively obtained from the outcropping ledges of this terrace. The surface is generally covered with a thick drift deposit and the underlying rocks only appear in the ravines of the streams. Nearly all the swamps contain thick deposits of muck and marl, furnishing in abundance the element for future fertility. The soil of the county is generally a very deep and fertile sandy or gravelly loam, intermixed with clay. This county embraces a portion of the celebrated "Genesee Country," which from the first settlement has been famed for its fertility. For many years wheat formed the staple product, but since the opening of the wheat lands of the west this product has gradually given way to a more profitable production of fruit and dairying. The county is well watered and its products find ready sale in the enormous markets that are within short shipping distance over railroads and trolley lines that traverse the county in every direction. The value of farm land including buildings is \$25,044,508. The average price per acre of farm property is \$71.43; twelve years ago it was \$40.41, showing that farm property in this county has almost doubled in value within the past ten years. The principal crops are corn, 388,719 bushels; oats, 698,648 bushels; wheat, 708,786 bushels; barley, 56,997 bushels; dry beans, 234,101 bushels; rye, 16,778 bushels; potatoes, 1,217,790 bushels; hay and forage, 92,123 tons. There are 3,052 farms reporting domestic animals, dairy cows, 13,768; horses, 12,988; swine, 12,770; sheep, 38,916; poultry, 166,902; milk from dairies, 6,897,768 gallons, and the total receipts from the sale of dairy products, \$592,060. There are 124 district schools, graded schools, academies and union schools located in many of the towns. There are 15 agricultural organizations whose purpose is to conserve the interest of the farmer. Land values in this county are increasing very rapidly.

### TOWN OF ALABAMA

Population 2,231

No. 488.—Farm of 100 acres, located 2 miles from Alabama P. O., R. D.; 4 miles from railway station at Basom, on line of West Shore R. R.; 2 miles from school and churches. Milk collected at door. Highway, good gravel road. Thirty miles from Buffalo, population 423,715, reached by rail or highway. General surface, nearly level. Altitude,

700 feet. Nature of soil, black loam. Acres in timber, 8; acres tillable, 92. Fruit, 120 fall and winter apple, 170 pear, 14 cherry, 10 plum, 10 prune and 150 peach trees. Best adapted to beans, corn, cabbage and potatoes. Fences, wire, in good condition. House, 2 stories, 9 rooms. Outbuildings: barn 38x100, hen house, hog house, wagon house, tool house, tenant house and granary. House watered by 2 wells, barns by well, fields

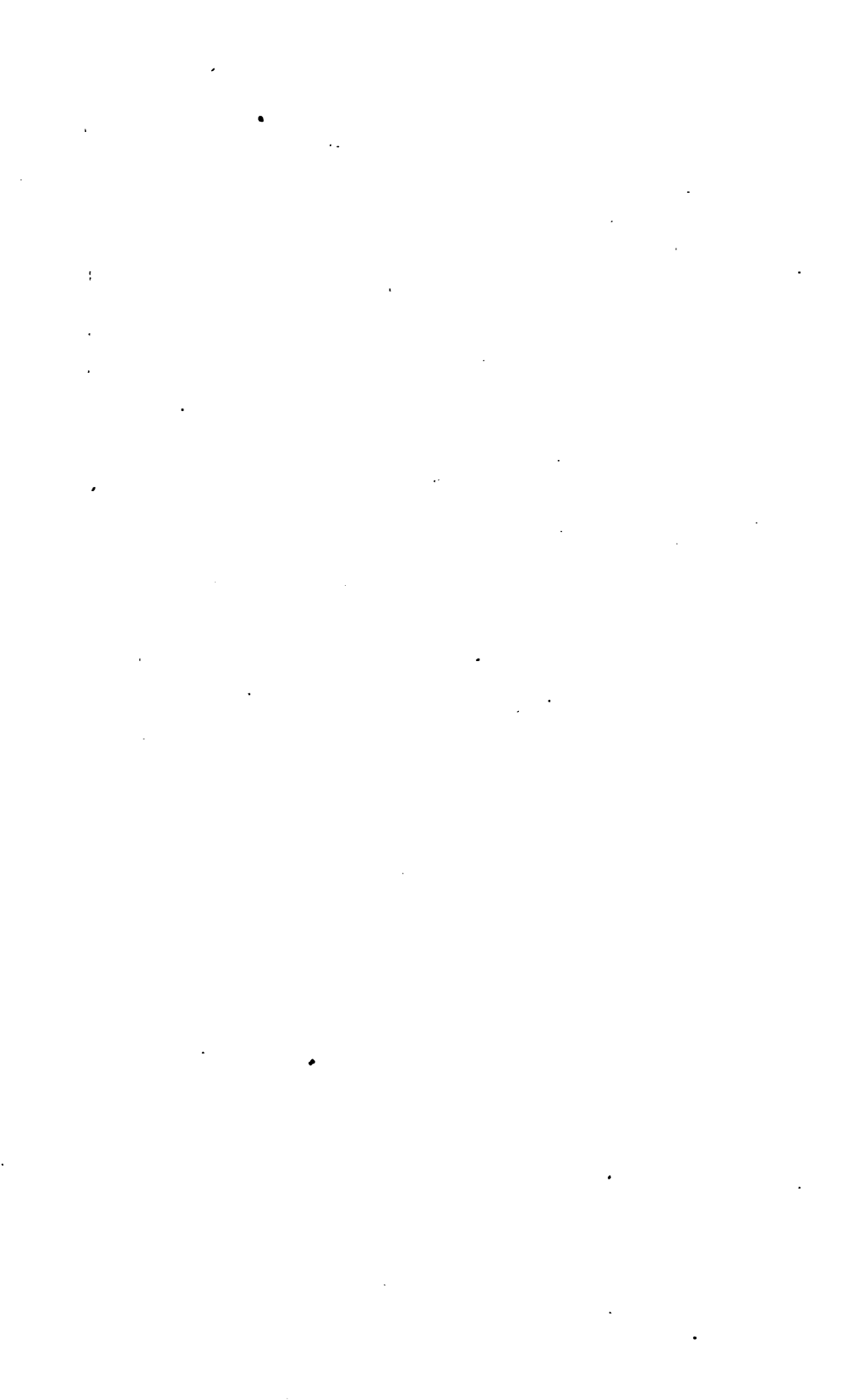


FIG. 297.—HOUSE ON FARM NO. 481,  
TOWN OF MAYFIELD, FULTON  
COUNTY.



FIG. 298.—BARN ON FARM NO. 421, TOWN OF CONCORD, ERIE COUNTY.





by springs and streams. Occupied by owner. Reason for selling, owner has another farm and cannot attend to both. Price, \$4,750. Terms reasonable. Address Theodore Drew, owner, R. D., Alabama, N. Y., or F. E. Horning, agent, R. D., Pembroke, N. Y.

## TOWN OF ALEXANDER

Population 1 362

No. 489.—Farm of 120 acres; located 2 miles from Alexander P. O., R. D. No. 1;  $1\frac{1}{4}$  miles from railway station at Linden, on line of Erie R. R.;  $1\frac{1}{4}$  miles from butter factory, milk station and milk condensing plant; 2 miles from cheese factory and Protestant churches; 4 miles from Catholic church. Highways, in good condition. This farm is 8 miles from Batavia and 31 miles from Buffalo, reached by rail and highway. Surface of farm, part rolling, balance level. Soil, loam, gravel, black, slate, etc. Acres in meadow, 20; in natural pasture, 30; in timber, 3, maple, good. All tillable except 10 acres. Fruit, about 6 acres of apple orchard; large quantity of fruit for family use, such as pears, plums, cherries, berries, etc. Adapted to general farming. Fences, wire and rail, fair condition. House, 13 rooms, good, except wood house needs slight repairs. Outbuildings, 1 gambrel roof barn, 1 horse barn, granary, tool sheds, etc., all in good condition. Watered by well, cistern, springs and brooks. Occupied by tenant. Reason for selling, ill health of owner. Price, \$7,000. Terms, \$1,000 down, balance on mortgage at 5%. Address J. Triftshanser, 185 North Main street, Hornell, N. Y. Owner will rent.

No. 490.—Farm of 140 acres; located  $3\frac{1}{2}$  miles from Alexander P. O.;  $\frac{3}{4}$  mile from railway station at Upton on the Lehigh Valley R. R.; 1 mile from school and  $3\frac{1}{2}$  miles from churches;  $\frac{3}{4}$  mile from milk station. Nature of highway, good gravel road. General surface, rolling. Altitude, 900 feet. Nature of soil, gravelly loam. Acres in pasture,  $22\frac{1}{2}$ ; in timber,  $7\frac{1}{2}$ , second growth; acres tillable, 120. Fruit, 4 acres of apples. All varieties of small fruits. Best adapted to oats, beans, hay, wheat and cabbage. Fences, wire, in fair condition;  $1\frac{1}{2}$  story, 9-room frame house. Outbuildings: barn 30x45 with basement, horse barn, hen house and wagon house. House watered by three good wells, barns, by well, fields, by 3 springs. Twenty-eight miles from Lake

Ontario. Occupied by tenant. Reason for selling, owner has other business. Price, \$8,400. Terms, half cash. Address, Mrs. Nellie Hudson, owner, 125 Summit street, Batavia, N. Y.

No. 491.—Farm of 113 acres, located 4 miles from Alexander P. O.;  $\frac{3}{4}$  mile from railway station at Ray, on line of D., L. & W. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{3}{4}$  mile from churches;  $\frac{3}{4}$  mile from butter factory;  $\frac{3}{4}$  mile from cheese factory and milk station. Highways, good. Nearest city Batavia, population 11,613, 6 miles distant, reached by highway. General surface slightly rolling. Altitude, 700 feet. Nature of soil, clay and black loam. Acres in meadow 40, in natural pasture 15, in timber 10, hardwood, saw timber. Acres tillable 95. Fruit, 1 acre of apples, standard varieties, 6 pear, 4 cherry, 3 peach and 12 plum trees, 3 grape vines, all kinds of berries and currants. Best adapted to hay, wheat, oats, beans, etc. Fences, wire and rail, good condition. House, frame, 2-story, 9 rooms, good condition. Outbuildings: barn 36x50, 15 stanchions, 3 stalls, cow barn 30x40, poultry house and milk house. House watered by well, barns, by well. Occupied by owner. Price, \$5,650. Terms, \$2,500 cash, balance on mortgage at 5 per cent. Address, David Cochran, owner, Alexander, N. Y., R. F. D., or Frank E. Horning, Broker, East Pembroke, N. Y.

No. 492.—Farm of 93 acres; located  $\frac{1}{4}$  mile from Alexander P. O., and railway station on line of L. V.; N. Y. C. and E. R. Rs.;  $\frac{1}{4}$  mile from school and churches;  $\frac{1}{4}$  mile from milk station. Population of Alexander 212. Altitude 700 feet. Nature of soil, sandy and gravelly loam. Acres in meadow 15; in pasture 3. Acres tillable 93. Fruit, 175 apple, 12 peach, 10 pear, 4 cherry, 10 plum trees and small fruit. Best adapted to potatoes, corn and beans. Fences, wire, good condition. House, 2 stories, 9 rooms. Barn 32x60, gambrel roof, hen house. House and barn watered by wells; fields, by spring and creek. Occupied by owner. Price, \$8,500. Terms, \$2,500, balance on mortgage. Address, W. C. Rabb, Owner, Alexander, N. Y. or Clyde Reece, Broker, R. D. East Pembroke, N. Y.

## TOWN OF BATAVIA

Population 13,830

No. 493.—Farm of 235 acres, located 1 mile from Batavia P. O., R. D. and railway station on line of N. Y. C.

R. R.; 1 mile from school and churches. Milk collected at door. Highway, state road. Altitude, 910 feet. Nature of soil, limestone. Acres in timber, 15; acres tillable, 220. Fruit, 10 acre apple orchard, fall and winter varieties; 12 pear, 4 cherry, 6 plum and 10 peach trees. Adapted to general farm crops. Fences, wire with steel posts, good condition. House, 2½ stories, 10 rooms, veranda and good cellar. Outbuildings, barn 32x132, with basement, 18 ft. posts, barn 30x45, hen, hog, wagon and tool houses. House watered by well and springs, barn, by well, fields, by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$18,500. Terms, mortgage \$5,000 at 5 per cent. Farm is worked by gasoline tractor engine. There is a gas lease on this farm. Address Henry Stortz, owner, Batavia, N. Y.

No. 494.—Farm of 101 acres, located 3 miles from Batavia P. O., R. D. and railway station, on line of N. Y. C., Erie and L. V. R. Rs.; 1 mile from school; 3 miles from churches and milk station. Highways, gravel 1 mile, state road 2 miles. Nearest city Batavia, population 11,613, 3 miles distant, reached by highway. General surface, slightly rolling. Nature of soil, loam with clay subsoil. Acres that can be used as meadow 80, in natural pasture 21, in timber 2. Fruit, 2 acres. Best adapted to beans, wheat, corn and potatoes. Fences, wire, in good condition. Eight-room brick house. Barn 30x80. House and barn watered by well. Occupied by owner. Reason for selling, wants smaller farm. Price, \$7,500. Terms, \$2,000 down, balance on mortgage. Address, John Kline, owner, Batavia, N. Y. or F. J. Corp & Son, Agents, 72 Main St., Batavia, N. Y.

No. 495.—Farm of 150 acres, located 1 mile from Batavia P. O., R. D. and railway station, on line of several railroads; 1 mile from school, churches and milk station. Highways, crushed stone. Nearest city Batavia, population 11,613, 1 mile distant, reached by highway. General surface level. Nature of soil, sand and gravel loam. Acres that can be used as meadow 130, in natural pasture 8. Acres tillable, 130. Fruit, 12 acres of apple orchard. Best adapted to all kinds of crops and truck farming. Fences, good. House, large, in fair condition. Outbuildings: 3 barns in fair condition. House and barns watered by well, fields by creek. Occupied by tenant. Reason for selling, to settle an

estate. Price, \$14,000. Terms: \$5,000 down, balance on mortgage. Address, Heirs of W. W. Plato, owners, Batavia, N. Y., or F. J. Corp & Son, Agents, 72 Main St., Batavia, N. Y.

No. 496.—Farm of 110 acres, located 2 miles from Batavia P. O., R. D. and railway station; on line of several railroads; 1 mile from school; 2 miles from churches and 2 miles from milk station. Highways, crushed stone. Nearest city, Batavia, population 11,613, 2 miles distant, reached by highway. General surface a little rolling. Nature of soil, limestone. Acres that can be used as meadow, 90; in natural pasture, 20; in timber, 8. Acres tillable, 90. Best adapted to all crops. Fences, 250 rods of new woven wire. Nine room house, built 6 years ago. Basement barn, 30x85. Occupied by tenant. Reason for selling, has other business. Price \$9,500. Terms \$3,000 down, balance on mortgage. Address J. L. Mann, owner, Batavia, N. Y., or F. J. Corp & Son, agents, 72 Main street, Batavia, N. Y.

No. 497.—Farm of 113 acres, located 4 miles from Batavia P. O., R. D. and 3 miles from railway station at West Batavia; on line of N. Y. C. R. R.; ¼ mile from school; 4 miles from churches and 3½ miles from milk station. Highways, crushed stone road. Nearest city Batavia, population 11,613, 4 miles distant, reached by highway. General surface a little rolling. Nature of soil lime stone loam. Acres that can be used as meadow, 85. Acres in timber, 4. Acres tillable, 85. Fruit, 30 trees of different varieties. Best adapted to all kinds of crops. Fences, 250 rods of wire, in excellent condition. House, 10 rooms, in good condition. Barn 30x73, gambrel roof and basement wing 16x30. House and barn watered by well. Occupied by owner. Reason for selling, poor health. Price \$8,500. Terms \$3,000 down. Address George W. Bolt, owner, Batavia, N. Y., or F. J. Corp & Son, agents, 72 Main street, Batavia, N. Y.

No. 498.—Farm of 62 acres, located 2 miles from Batavia P. O., R. D. and railway station; on line of several railroads; 2 miles from school, churches and milk station. Highways, crushed stone and pavement. Nearest city Batavia, population 11,613, 1 mile distant, reached by highway. General surface nearly level. Nature of soil, loam. Acres that can be used as meadow, 60; in timber, 2. Acres tillable, 60. Best

adapted to all kinds of crops. Fences fair. Ten-room house. Outbuildings, 3 barns. House and barns watered by wells. Occupied by tenant. Reason for selling, owner lives in another city. Price \$8,000. Terms \$3,000 down, balance on mortgage. Address A. A. Benham, owner, Batavia, N. Y., or F. J. Corp & Son, agents, 72 Main street, Batavia, N. Y.

No. 499.— Farm of 113 acres, located 4 miles from Batavia P. O., and 2 miles from railway station at West Batavia on line of N. Y. C. R. R.; 4 miles from High and  $\frac{1}{2}$  mile from district schools; 4 miles from churches; 4 miles from cheese factory and 2 miles from milk station. Highways, good gravel roads. Nearest city, Batavia, population 11,613, 4 miles distant, reached by highway. General surface, level. Nature of soil, gravel loam. Acres in meadow, 20; in natural pasture, 10; in timber, 4, second growth. Acres tillable, 85. Fruit, 30 apple trees; 16 pear and small fruit for home use. Best adapted to potatoes, wheat, beans, etc. Fences, wire and rail, good condition. House, 2-stories, 10 rooms, good condition. Outbuildings: main barn, 30x75, gambrel roof, basement, ell 16x30 for horse barn, poultry house, 10x20. House, barns and fields watered by wells. Occupied by owner. Reason for selling, ill health. Price, \$8,500. Terms, \$3,000 down, balance at 5 per cent. Address George M. Bolt, owner, Batavia, N. Y., or F. C. Corp & Son, agents, Batavia, N. Y.

No. 500.— Farm of 47 $\frac{3}{4}$  acres, located 4 miles from Batavia P. O.; 1 mile from railway station at Upton, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school; 2 $\frac{1}{2}$  miles from churches; 2 miles from butter factory; 2 miles from cheese factory and 1 mile from milk station. Highways, good. General surface, slightly rolling. Altitude, 680 feet. Nature of soil, gravelly and dark loam. Acres that can be used as meadow 18, in natural pasture 4, in timber 1 $\frac{1}{4}$ , hard wood. Acres tillable 42. Best adapted to all kinds of farm and garden crops. Fences, wire, fair condition. House, new concrete-block residence, 2 stories, 6 rooms, good condition. Outbuildings: basement barn 26x36, concrete floor, modern throughout, concrete hog house, poultry house, concrete and frame, good condition. House watered by well and cistern, barns by well. Occupied by owner. Price \$5,500 equipped. Terms,

\$3,000 cash, balance on mortgage at 5 per cent. This place is well equipped with stock and tools and has new buildings. Address, Floyd Evans, owner, Batavia, N. Y., R. F. D., or address Frank E. Horning, broker, East Pembroke, N. Y.

No. 501.— Farm of 235 acres; located 1 mile from Batavia P. O., and railway stations on lines of N. Y. C., L. V., and Erie R. Rs.; 1 mile from school and churches; 1 mile from milk station. Population of Batavia, 11,613, reached by good highway. General surface, rolling. Altitude 700 feet. Nature of soil, limestone loam. Acres in meadow 60; in pasture 15; in timber 15. Acres tillable 220; fruit, 10 acres of apples, 12 pear trees, 4 cherries, 6 plums, 2 prunes, 10 peaches. Best adapted to general farm crops. Fences, wire on steel posts. House 2 $\frac{1}{2}$  stories, 10 rooms. Outbuildings: basement barn 32x120, good condition, horse barn 30x45, other outbuildings. House and barns watered by wells, fields, by Tonawanda creek. Occupied by owner. Price, \$18,500. Terms, \$13,400 cash, balance on mortgage at 5 per cent. Address, Henry Stortz, owner, Batavia, N. Y., or Clyde Reece, agent, R. D. No. 11, East Pembroke, N. Y.

#### TOWN OF BERGEN

Population 1,631

No. 502.— Farm of 65 acres, located 3 miles from Bergen P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 $\frac{1}{2}$  miles from school; 3 miles from churches. Milk collected at door. Highway, gravel and state road, 18 miles from Rochester, population 218,149, reached by rail or highway. General surface, rolling. Altitude, 600 feet. Nature of soil, gravelly loam. Acres in timber, 12; acres tillable, 53. Fruit, all kinds and berries. Best adapted to beans, wheat and potatoes. Fences, mostly wire in good condition. House, frame, 1 $\frac{1}{2}$  stories, 9 rooms, veranda two sides. Outbuildings: barn 32x45 with basement, carriage house large enough for tools, new hen house 16x25, well house. House and barn watered by wells. Occupied by owner. Reason for selling, has another farm and cannot properly take care of both. Price \$5,200. Terms part cash. Address Harry J. Cook, owner, R. D., Bergen, N. Y., or F. E. Horning, agent, R. D., East Pembroke, N. Y.

No. 503.—Farm of 123 acres, located 4 miles from Bergen P. O., R. D. No. 31;  $\frac{1}{2}$  mile from railway station at West Bergen; on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches; 5 miles from butter factory and  $\frac{1}{2}$  mile from milk station. Highways, level, good condition. General surface mostly level. Altitude, 604 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 20; in natural pasture, none; in timber, 8; beech and maple. Acres tillable, 115. Fruit, 40 trees, various kinds. Best adapted to wheat and beans. Fences, wire and rail, good condition. House, 2-stories, 9 rooms, good condition. Outbuildings, barn 30x40, barn 30x56, shed 30x16, good condition. House watered by wells, barns by wells, fields by wells. Occupied by tenant. Reason for selling, too much real estate. Price \$13,100. Terms \$6,000 cash, balance on mortgage. Address G. H. Church, owner, Bergen, N. Y., or W. S. & C. E. Housel, brokers, Bergen, N. Y.

No. 504.—Farm of 60 acres; located 4 miles from Bergen P. O., R. D. No. 31 and railway station on line of N. Y. C. R. R.; 1 mile from school; 4 miles from churches; 3 miles from milk station. Population of Bergen 637, reached by level gravel road. General surface, rolling and level. Altitude, 600 feet. Nature of soil, gravelly loam. Acres in meadow, 15; in pasture, 2; in timber, 4, second growth. Acres tillable, 55. Fruit, 40 trees, 20 years old; 105 others, 1 year old. Best adapted to wheat and beans. Fences, wire, in good condition. House,  $1\frac{1}{2}$  stories, 8 rooms, good condition. Outbuildings: barn, 30x54, gambrel roof; sheep shed, 16x30; barn, 16x14; barn, 20x30; barn, 24x30; all in good condition. House, barns and fields watered by wells. Occupied by owner. Reason for selling, ill health. Price, \$6,900. Terms, \$4,500 cash, balance on mortgage. Address Jacob Blim, owner, Bergen, N. Y., or W. S. & C. E. Housel, brokers, Bergen, N. Y.

No. 505.—Farm of 116 acres, located  $\frac{1}{4}$  miles from West Bergen P. O., R. D. No. 33, and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches; 4 miles from butter factory and  $\frac{1}{4}$  mile from milk station. Highways, good. General surface slightly rolling to south. Altitude, 604 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 50; in natural pasture, 10; in timber, 4, all second

growth. Acres tillable, 100. Fruit, about 30 apple trees. Best adapted to wheat, beans, corn, potatoes and oats. Fences, wire and rail, good condition. House,  $1\frac{1}{2}$  and 2-stories, 9 rooms, also tenant house. Outbuildings, barns, 70x32; 20x40, 16x20, 10x20, good condition. House watered by wells, barns by wells, fields by wells. Occupied by owner and son. Reason for selling, death in the family. Price, \$10,000. Terms, \$4,000 cash, balance on mortgage. Address George Redinger, owner, West. Bergen, N. Y.

No. 506.—Farm of 210 acres, located 3 miles from Bergen P. O., R. D. No. 33;  $1\frac{1}{2}$  miles from railway station at West Bergen; on line of N. Y. C. R. R.; 1 mile from school; 3 miles from churches;  $3\frac{1}{4}$  miles from butter factory;  $1\frac{1}{2}$  miles from milk station. Population of Bergen 637, reached by good gravel road. General surface, rolling. Altitude, 600 feet. Nature of soil, gravel loam. Acres in meadow, 20; in timber, 30, virgin beech and maple. Acres tillable, 180. Fruit, 3 acres of apples. Best adapted to wheat, beans, potatoes, peas and corn. Fences, wire and rail, fair condition. House, 14 rooms, 2 stories; 8-room tenant house, both in fair condition. Outbuildings: barn, 70x32; barn, 60x30 with basement; barn, 28x50, need some repairs and painting. House, barns and fields watered by wells. Occupied by tenant. Reason for selling, owner non-resident. Price \$21,000. Terms, \$5,000 cash, balance on mortgage. Address, C. H. Lewellyn, owner, Batavia, N. Y., or W. S. & C. E. Housel, brokers, Bergen, N. Y.

No. 507.—Farm of 143 acres, located  $4\frac{1}{2}$  miles from Bergen P. O., R. D. No. 31; 5 miles from railway station; on line of N. Y. C. R. R.;  $\frac{3}{4}$  mile from school;  $4\frac{1}{4}$  miles from churches; 10 miles from butter factory; 10 miles from cheese factory and  $4\frac{1}{2}$  miles from milk station. Highways, good. General surface, level. Altitude, 604 feet. Nature of soil, black loam. Acres that can be used as meadow, 20; in natural pasture, 15; in timber, 40, mostly second growth. Acres tillable, 85. Fruit,  $\frac{1}{2}$  acre of strawberries, 250 cherry trees, 4 years old, mostly Mt. Morencies. Best adapted to wheat, potatoes, corn and garden truck. Fences, wire, good condition. House, 2-stories, 8 rooms, good condition. Outbuildings, barns, 30x40; 30x42; 10x15; 16x30; fair condition. need some repairs. House watered by

well, barns by well and fields by creek. Occupied by owner. Reason for selling, desires a smaller farm. Price, \$5,700. Terms, \$3,000 cash, balance on mortgage. Address, Chester Austin, owner, Bergen, N. Y., or W. S. & C. E. Housel, brokers, Bergen, N. Y.

## TOWN OF BETHANY

Population 1,270

No. 508.— Farm of 87 acres, located 2 miles from Putnam Settlement P. O., R. D. and 2 miles from railway station at Batavia on line of N. Y. C. R. R.; 5 rods from school; 2 miles from churches. Highways, State road and gravel. Surface, nearly level. Altitude, 900 ft. Nature of soil, black loam. Acres in timber, 10, elm, beech and maple. Acres tillable, 77. Adapted to general farm crops. Fences, wire, in good condition. House, 2-stories, 11 rooms, 4 verandas, good cellar and painted. Outbuildings: barn 30x60 with basement, hay barn, new hen house, hog house and wagon house. House watered by 2 wells and springs, barns, by well; fields, by springs; 23 miles from Lake Ontario. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$8,500. Gas in house for light and heat. Address John Kinney, owner, Batavia, N. Y.

No. 509.— Farm of 464 acres, located 3 miles from Bethany P. O., R. D. and railway station; on line of Lehigh Valley R. R.; 40 rods from school and churches; 3 miles from milk station. General surface, mostly rolling, some hilly. Altitude, 700 feet. Nature of soil, dark loam. Acres that can be used as meadow, 33; in timber, 33, all kinds. Acres tillable, 400. Fruit, 55 acres choice apples, 10 acres pears, 2 acres of cherries. Best adapted to fruit and stock. Fences, wire, good condition. House, 2 stories, 12 rooms. Outbuildings: 2 basement barns, each 40x60; main barn, 40x76, painted. House watered by well, barns by pump station. Occupied by owner. Reason for selling, has other large farms. Price, \$46,400. Terms on application. Address, Ellen C. Page, owner, 408 East Main street, Batavia, N. Y., or Clyde Reece, broker, R. D. No. 11, East Pembroke, N. Y.

## TOWN OF BYRON

Population 1,520

No. 510.— Farm of 138 acres, located 1½ miles from South Byron P. O. and

railway station on line of N. Y. C. R. R.; 1½ miles from high school; ½ mile from district school; 1½ miles from churches; milk collected at the door; 1½ miles from milk station. Highways, crushed stone. Nearest city Batavia, population 11,613, 7 miles distant, reached by rail and highway. General surface, just a little slope to southeast. Nature of soil, good loam, clay subsoil. Acres that can be used as meadow, 130; in natural pasture, 8; in timber, 8. Acres tillable, 130. Fruit, 2 acres of young apple trees. Best adapted to beans, wheat, corn and all kinds of crops, good alfalfa land. Fences, good woven wire. House, 9 rooms, modern, nearly new. Outbuildings, basement barn, 36x70, gambrel roof, wing 30x40, wind mill. House watered by well, barns, by well and fields, by springs. Occupied by tenant. Reason for selling, owner lives out of town. Price, \$14,000. Terms, \$5,000 cash, balance on mortgage. Address A. J. Waterman, owner, Batavia, N. Y., or F. J. Corp & Son, brokers, Batavia, N. Y.

## TOWN OF DARIEN

Population 1,779

No. 511.— Farm of 25 acres, located 1½ miles from Darien Center P. O. and railway station on line of Erie R. R.; 1 mile from school; 1 mile from churches and 1½ miles from milk station. Highways, good. Nearest village Attica, population 1,869, 6 miles distant, reached by rail and highway. General surface, level. Nature of soil, gravel and clay. Acres in meadow, 6. Acres tillable, all. Fruit, 75 apple trees and fruit for family use. Best adapted to general crops. Fences mostly wire, in good condition. House, 2 stories, in good condition. Outbuildings, barn, 32x42 with lean-to on both sides, 12x32; poultry house. House and barns watered by well. Occupied by owner. Reason for selling, other business. Price, \$3,125. Terms, \$1,200 cash, balance on mortgage. Address P. A. Loomis, owner, R. D. No. 10, Darien Center, N. Y., or Garfield Real Estate Company, brokers, Rochester, N. Y.

No. 512.— Farm of 165 acres; located ¼ mile from Darien P. O., R. D. 14; ¾ mile from railway station at Darien, on line of Erie R. R.; ¼ mile from school and churches; 7 miles from butter factory; 3 miles from cheese factory; ¾ mile from milk station. Highways in

fair condition. Nearest city, Batavia, 14 miles distant, population 11,613, reached by rail and highway. Surface of farm, slightly rolling. Soil, gravel loam. Acres in meadow, 23; in natural pasture, 20; in timber, 20, maple, fine sugar bush. Acres tillable, 125. Fruit, about 130 trees. Best adapted to alfalfa, corn, wheat, potatoes and cabbage. Fences, wire, in good condition. House, new, 12 rooms; also 6-room tenant house, good condition. Outbuildings: barn, 40x70; barn, 28x48; ice house, all in good condition. Watered, house by well, barns by hydraulic ram, fields by springs. Occupied by owner. Reason for selling, ill health of owner. Price \$20,000. Terms, \$5,000 down, balance on mortgage. Fine fish pond on farm close to house. Address James C. Lathrop, owner, Darien Center, N. Y., Genesee County.

No. 513.—Farm of 130 acres, located  $\frac{3}{4}$  mile from Darien Center P. O.;  $\frac{1}{4}$  miles from railway station; on line of Erie R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches, and  $1\frac{1}{4}$  miles from milk station. Highways, State road. Nearest city Buffalo, population 423,715, 24 miles distant, reached by rail or highway. General surface of farm a little rolling. Nature of soil, loam, clay subsoil. Acres that can be used as meadow, 110; in natural pasture, 20; in timber, 6, sugar maple, beech and basswood. Acres tillable, 110. Fruit, 2 acres of apple orchard. Best adapted to corn, wheat, potatoes, beans and alfalfa. Fences, wire, good condition. House, 9 rooms, modern gothic, good condition. Outbuildings, new barn 36x62, with gambrel roof, concrete floor, 20 swing stanchions, water in barn, built in 1912; large new silo, new barn 26x36, barn 30x44. House watered by well, barns by well and fields by spring. Occupied by tenant. Price, \$9,000. Terms, \$2,000 cash, balance on mortgage. Price includes 10 cows. Address F. J. Corp, owner, Batavia, N. Y.

No. 514.—Farm of 53 acres located 3 miles from Corfu P. O., R. D. and railway station on line of N. Y. C. R. R.;  $\frac{3}{4}$  mile from school; 2 miles from churches; 1 mile from milk station. Nearest city Batavia, population 11,613, reached by rail or good level highway, 3 miles distant. General surface, slightly rolling. Altitude, 700 feet. Nature of soil, gravel loam. Fruit, variety for home use. Best adapted to general farming. Fences, wire and rail, good condition. House,  $1\frac{1}{2}$  stories, 10 rooms.

Barns 20x26, 30x40. House, barns and fields watered by wells. Occupied by tenant. Price, \$3,500. Terms, \$2,000 cash, balance on mortgage. Address N. W. Neeland, owner, Corfu, N. Y., or Clyde Reece, broker, R. D. No. 11, East Pembroke, N. Y.

No. 515.—Farm of 60 acres, located  $\frac{1}{4}$  mile from Corfu P. O. and railway station; on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches and  $\frac{1}{4}$  mile from milk station. Highways, level and good. General surface, slightly rolling. Altitude, 700 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 10; in natural pasture, 8; in timber, 3. Acres tillable, 52. Fruit, 250 apple trees, Baldwins, Greenings, Spies, and other fruit. Best adapted to general farm crops. Fences, wire, good condition. House, frame 42x25,  $1\frac{1}{2}$  stories, 9 rooms. Outbuildings: barns 30x38, 20x60, need painting and some repairs. House watered by well, barns by well and fields by spring. Occupied by owner. Price, \$5,250. Terms, \$3,300 cash, balance on mortgage. Natural gas in house. Address L. G. Hilbon, owner, Corfu, N. Y., or Clyde Reece, broker, East Pembroke, N. Y., R. D. No. 11.

No. 516.—Farm of 132 acres, located 3 miles from Darien Center P. O., R. D.;  $\frac{1}{3}$  mile from railway station at Fargo; on line of D. L. & W. R. R.;  $\frac{1}{3}$  mile from school;  $3\frac{1}{2}$  miles from churches;  $\frac{1}{3}$  mile from milk station. Nearest village Corfu, population 413,  $3\frac{1}{2}$  miles distant, reached by rail or level highway. Altitude, 700 feet. Nature of soil, gravel and dark loam. Acres in meadow, 30; in pasture, 12; in timber, 12; acres tillable, 100. Fruit, 2 acres of apples, 12 pear trees, cherries, 9 plums, 3 peaches. Best adapted to general farm crops. Fences, wire and rail. House, frame, 2 stories, 10 rooms. Outbuildings: barn 36x110 with wing 30x70, silo 16x30; hen house, wagon shed and tool house. House and barns watered by well, fields by creek. Occupied by owner. Price \$13,200. Terms, \$5,000 cash, balance on mortgage at 5 per cent. for 10 years. Address Louiese Schell, owner, Darien Center, N. Y., or Clyde Reece, agent, R. D. No. 11, East Pembroke, N. Y.

No. 517.—Farm of 170 acres, located  $\frac{1}{2}$  mile from Darien P. O. and railway station; on line of Erie R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches and  $\frac{1}{2}$  mile from milk station. Highways, level, good condition. General surface,



FIG. 299.—HOUSE ON FARM 555, TOWN OF INLET, HAMILTON COUNTY.



FIG. 300.—HOUSE ON FARM No. 511, TOWN OF DARIEN, GENESEE COUNTY.



rolling. Altitude, 700 feet. Nature of soil, dark loam. Acres that can be used as meadow, 40; in natural pasture, 35; in timber, 35; all kinds. Acres tillable, 120. Fruit, 8 acres of Baldwins, Spies, etc., 4 pear, 10 cherry and 15 plum trees. Best adapted to general farm crops. Fences, wire, good condition. House, 2-stories, 12 rooms, good cellar. Outbuildings, hip roof 40x100, root cellar 16x30, poultry house, hog house, ice house and tool house. House watered by wells, barns by wells, fields by springs. Occupied by tenant. Price, \$10,000. Terms, \$2,000 cash, balance on mortgage at 5 per cent. Address Mrs Wallace Herrington, owner, Darien Center, N. Y., or Clyde Reece, broker, R. D. No. 11, East Pembroke, N. Y.

No. 518.—Farm of 87 acres, located  $1\frac{1}{2}$  miles from Corfu P. O., R. D.;  $\frac{3}{4}$  mile from railway station at Longwood on lines of N. Y. C., Lehigh Valley and D. L. & W. R. R.;  $\frac{1}{2}$  mile from school and churches; 80 rods from milk station. Highways, State road and gravel. General surface, rolling. Altitude, 900 feet. Nature of soil, gravel loam. Acres in timber, 7; acres, tillable, 80; fruit, 2 acres apple orchard, fall and winter varieties; 8 pear, 5 cherry, 4 plum, 10 peach, 6 quince and 2 prune trees. Fences, wire. Frame house, 2 stories, 12 rooms, veranda, good cellar. Outbuildings, barn 36x54 with basement, corn crib, hen house, wagon house, ice house and tool house. House and barns watered by well and springs; 25 miles from Lake Ontario. Occupied by owner. Reason for selling, owner wishes to retire. Price \$7,000. Terms,  $\frac{1}{2}$  cash, balance 5%. Address Lawson Jones, owner. Darien Center, N. Y., R. D.

No. 519.—Farm of 170 acres; located 1 mile from Darien Center P. O., R. D. 12;  $\frac{1}{2}$  mile from railway station at Darien; on line of Erie R. R.; 1 mile from school and churches; 3 miles from butter factory and cheese factory;  $\frac{1}{2}$  mile from milk station. Highways, in good condition. Nearest large village, Attica, 7 miles distant, population about 1,869, reached by rail and highway. Surface of farm, rolling. Altitude, about 1,100 feet. Soil, gravelly loam. Acres in meadow, 35; in natural pasture, 25; in timber, 35, about 500 sugar maples, beech, elm and ash, mostly first growth. Acres tillable, 110. Fruit, about 8 acres of apples, small plum orchard; also quinces, crab apples and grapes. Best adapted to grain, beans and potatoes.

Fences, wire and rail, good condition. House, upright, 32x40, with wing, 26x40. 2 stories. Outbuildings, basement barn, 40x90, built 5 years ago; silo; ice house; chicken house and pig pen combined; shed, 20x30; and sugar house in woods. Watered, house, by well and cistern; barns, by well; fields, by stream and spring. Occupied by owner. This farm has been in family 99 years. Reason for selling, owner wishes to retire from business. Price, \$10,000. Terms, \$3,000 down, balance on mortgage at 5 per cent. Address Mrs. Wallace Herrington, owner, Darien Center, N. Y.

No. 520.—Farm of 52 $\frac{1}{2}$  acres; located  $2\frac{1}{4}$  miles from Darien Center P. O., R. D. 10;  $1\frac{1}{4}$  miles from railway station at Fargo; on line of D., L. & W. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from Catholic and Protestant churches;  $1\frac{1}{4}$  miles from milk station. Highways, good. Nearest city, Batavia, population 11,613, 14 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, clay loam and gravel. Acres in meadow 25; in natural pasture, 3; in timber, 5, maple, beech, etc. Acres tillable, 45. Fruit, apples, pears and cherries. Best adapted to hay, wheat, oats, corn, beans, cabbage, etc. Fences, wire, good condition. House, 8 rooms, good condition. Outbuildings, horse barn, 26x32; cow barn, 24x56, with basement; granary, 20x20; hen house, 12x20; 2 sheds; all in good condition. Watered, house and barn, by wells; fields, by brook and spring. Occupied by owner. Reason for selling, death in family. Price, \$3,500. Terms, \$2,000 down. Address A. D. Brown, owner, Darien Center, N. Y.

No. 521.—Farm of 160 acres; located  $1\frac{1}{2}$  miles from Darien Center P. O., R. D. 10;  $1\frac{1}{4}$  mile from railway station at Webber's Crossing, on line of D., L. & W. R. R.; school across from farm;  $1\frac{1}{2}$  miles from Catholic and Protestant churches;  $\frac{1}{4}$  mile from milk station. Highways, good. Nearest city, Batavia, population 11,613, 13 miles distant, reached by rail and highway. Surface of farm, level. Fertile soil. Acres in meadow, 70; in timber, 10, elm, maple, beech, etc. Acres tillable, 150. Fruit, over 200 apple trees. Best adapted to hay, wheat, oats, beans, cabbage, etc. Fences, wire, good. House, 14 rooms, firstclass condition. Outbuildings, horse barn, tool shed, grain barn, hog pen, hen house, milk house, ice house, good condition. Watered by well and

spring. Occupied by owner. Reason for selling, death in family. For price and terms address A. D. Brown, owner, Darien Center, N. Y.

No. 522.—Farm of 87 acres, located  $1\frac{1}{2}$  miles from Corfu P. O., R. D.;  $\frac{3}{4}$  mile from railway station at Longwood on lines of N. Y. C., Lehigh Valley and D., L. & W. R. Rs.;  $\frac{1}{2}$  mile from school and churches; 80 rods from milk station. Highways, State road and gravel. General surface, rolling. Altitude, 900 feet. Nature of soil, gravel loam. Acres in timber, 7; acres, tillable, 80; fruit, 2 acres apple orchard, fall and winter varieties; 8 pear, 5 cherry, 4 plum, 10 peach, 6 quince and 2 prune trees. Fences, wire. Frame house, 2 stories, 12 rooms, veranda, good cellar. Outbuildings, barn 36x64 with basement, corn crib, hen house, wagon house, ice house and tool house. House and barns watered by well and springs; 25 miles from Lake Ontario. Occupied by owner. Reason for selling, owner wishes to retire. Price \$7,000. Terms  $\frac{1}{2}$  cash, balance 5 per cent. Address Lawson Jones, owner, Darien Center, N. Y., R. D.

#### TOWN OF ELBA

Population 1,384

No. 523.—Farm of 285 acres; 1 mile from West Shore station; 2 miles from Elba P. O., R. D.; 4 miles from Batavia, population, 11,613. Soil, rich, black loam and gravel. 100 acres, meadow; 25, pasture; 10, timber; balance in crops. House, 32x62, modern and in first-class repair. Barns, large and fitted for horse and cattle raising. Spring and brook water. Good fences. 2 tenant houses. Price, \$40,000. Terms, part cash, balance on long time. Address Fred B. Parker, owner, Elba, N. Y., R. D.

No. 524.—Farm of 196 acres, located 2 miles from Elba P. O., and 3 miles from Elba railway station on line of West Shore R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches and 3 miles from milk station. Highways, fine gravel road. Nearest city Batavia, population 11,613, 8 miles distant, reached by highway. General surface just rolling enough for good drainage. Nature of soil, gravel loam. Acres than can be used as meadow, 175; in timber, 8, beech and maple. Acres tillable, 175. Fruit, 100 apple, 25 pear, 10 peach, 10 cherry trees and small fruits. Best adapted to wheat, oats, corn, beans, potatoes and cabbage.

Fences, wire and rail, good condition. Large house in good condition, also tenant house. Outbuildings, grain barn, horse barn, cow barn, silo, sheds in fair condition. House watered by well, barns by well and brook, fields by windmill and brook. Occupied by tenant. Reason for selling, ill health of owner. Price, \$15,000. Terms, small cash payment, balance on long time mortgage. Address J. W. Jones, owner, Batavia, N. Y.

No. 525.—Farm of 32 acres, located  $1\frac{1}{4}$  miles from Elba P. O., R. D. 19 and railway station on the West Shore R. R.;  $1\frac{1}{4}$  miles from school and 1 mile from churches;  $1\frac{1}{4}$  miles from milk station. Highways, good. Nearest city, Batavia, population 11,613, 7 miles distant, reached by highway. General surface, slightly rolling. Nature of soil, gravel and sand. Acres in meadow, 6; in pasture, 2; acres tillable, 30. Fruit, 60 apple, 12 peach, 6 cherry, 3 plum, 5 quince and 3 pear trees. Adapted to all crops. Fences, wire, in good condition. House, 10 rooms, good condition. Outbuildings, 30x40, wagon house 20x30, cow shed 18x36, wood shed 10x18, all in good condition. House and barn watered by well, fields by spring and creek. Occupied by owner. Price upon application. Address Herbert Barker, owner, Elba, N. Y.

#### TOWN OF LEROY

Population 5,442

No. 526.—Farm of 115 acres, located 5 miles from LeRoy P. O., R. D. and  $2\frac{1}{2}$  miles from railway station at North LeRoy on line of Lehigh R. R.;  $1\frac{1}{2}$  miles from school and churches. Five miles from butter factory. Highway, good. General surface of farm, rolling, well drained. Nature of soil, gravel loam, some stone. Acres in meadow, 15; in pasture, 10; in timber, 15, first and second growth of maple and elm. Acres tillable, 90. Fruit, 30 apple trees, variety of small fruit. Adapted to general farming. Fences, wire and rail, in fair condition. Nine-room house in good repair. Outbuildings: barn 30x70 on basement, shed 16x40, carriage shed, poultry house, etc. House and barns watered by well, fields by springs. Occupied by owner. Reason for selling, has other business prospects. Price \$5,000. Terms \$2,000 cash, balance at 5%. Address Frank Marion, owner, R. D., LeRoy, N. Y., or Chapman's Real Estate Agency, agents, LeRoy, N. Y.

No. 527.—Farm of 100 acres, located 3 miles from Mayfield P. O., R. D. 1, and railway station on the F., J. & G. R. R.; 2 miles from Broadalbin; 2 miles from butter factory. Highways, dirt and state road. Nearest large city, Gloversville, population 20,642, reached by rail or highway, 7 miles distant. General surface of farm, level. Altitude, 745 feet. Nature of soil, heavy loam. Acres in meadow, 60; in pasture, 20; in timber, 30, hardwood, hemlock and spruce. Acres tillable, 60. Fruit, 12 plum trees. Best adapted to dairying. Fences, wire, good condition; 2-story, 12 room house, painted. Outbuildings: barn 32x60 with basement, barn 30x30, hen house and corn house. House watered by well, barns, by creek, fields, by two creeks. Adirondack mountains 4 miles distant. Occupied by owner. Possession given at any time. Reason for selling, has other business. Price, \$3,600. Terms, part down. Address B. F. Loucks, owner, LeRoy, N. Y., or G. W. Haines, agent, Mayfield, N. Y.

No. 528.—Farm of 100 acres, 1½ miles from LeRoy P. O., R. D. and railway station on lines of B. R. & P. and N. Y. C. R. R.; 1½ miles from school and churches. Nature of highways, good. General surface, level, slightly rolling. Nature of soil, gravel loam. Acres in meadow, 35; in timber, 10, second growth. Acres tillable, 88. Fruit, 1½ acres of apples. Best adapted to general farm crops. Not much fencing. House, 12 rooms, in fair condition. Outbuildings, new main barn, 32x106, 16 ft. posts, with addition 20x50. Poultry house, etc. House watered by well, barns by spring, gravity system. Occupied by tenant. Lease expires April 1, 1915. Reason for selling, owner has other business. Price \$12,500. Terms, one-third cash. Address B. F. Loucks, owner, LeRoy, N. Y., or Chapman's Real Estate Agency, agents, LeRoy, N. Y.

No. 529.—Farm of 85 acres, located 5 miles from LeRoy P. O., R. D.; 3 miles from railway station at North LeRoy on line of Lehigh Valley R. R.; 1 mile from school; 2 miles from churches. Highways, good. General surface of farm, level. Nature of soil, limestone. Acres in meadow, 15; in pasture, 5; in timber, 5; acres tillable, 75. Fruit, 1 acre of apples, set in 1911, variety of small fruit for family use. Best adapted to general farm crops. Fences, wire, in good condition. House, 11 rooms, re-

cently repaired and painted. Outbuildings: barn 36x50, poultry house and tool shed. House and barn watered by well. Occupied by owner. Reason for selling, family wishes to move to city. Price, \$60 per acre. Terms \$2,100 cash payment. Address F. W. Cook, owner, R. D., LeRoy, N. Y., or Chapman's Real Estate Agency, agents, LeRoy, N. Y.

No. 530.—Farm of 78 acres, located 1 mile from LeRoy P. O., R. D. and railway station on line of Erie, B. R. & P. and N. Y. C. R. R.; 1 mile from school and churches. Highways, very good. General surface, slightly rolling. Nature of soil, loam. Acres in meadow, 19; acres tillable, 70. Fruit, 8 to 10 acres prime apples, and variety of small fruit for home use. Adapted to general farm crops. Fences, wire and rail. House of 10 rooms. Outbuildings, ample in size and in good condition. House watered by well. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$12,300. Terms ½ cash, balance at 5 %. Natural gas for light and heat at very cheap rates. Address Robert Toal, owner, R. D., LeRoy, N. Y., or Chapman's Real Estate Agency, agents, LeRoy, N. Y.

## TOWN OF PAVILION

Population 1,462

No. 531.—Farm of 65 acres, located 3¼ miles from LeRoy P. O., R. D.; ½ mile from railway junction of the B. R. & P. and D., L. & W. R. R.; ½ mile from school; 3¼ miles from churches; 3¼ miles from butter factory. Nature of highway, good. General surface of farm, rolling. Nature of soil, gravelly loam. Acres in meadow, 18; in timber, 15. Acres tillable, 60. Fruit, 4 acres of Baldwin and King apples, 1 acre of peaches, 132 pear trees, ¼ acre German prunes and variety of small fruit. Adapted to general farm crops. Fences, wire, in good condition. Nine-room house in good condition. Outbuildings: 2 barns about 24x60 and 24x36, newly shingled and painted, hollow tile poultry house 19x45. Fruit cellar of 130 barrels capacity. House and barns watered by well. Occupied by owner. Reason for selling, desires larger farm. Price \$6,500, reasonable payment, balance at 5 %. Address Thomas A. Spring, owner, R. D., LeRoy, N. Y., or Chapman's Real Estate Agency, agents, LeRoy, N. Y.

## TOWN OF PEMBROKE

Population 2,301

No. 532.—Farm of 96 acres, located  $1\frac{1}{4}$  miles from East Pembroke P. O. and 1 mile from railway station at West Batavia on N. Y. C. R. R.;  $1\frac{1}{4}$  miles from High school and churches. Highway, state road and brick. Nearest city, Batavia, population 11,613, 5 miles distant. General surface, mostly level. Altitude, 875 feet. Nature of soil, gravel loam. Acres in timber, 31; acres tillable, 65. Fruit, 2 acres of apple orchard, fall and winter, 2 pear and 2 plum trees, currants and berries. Best adapted to grain, beans and potatoes. Fences, wire in good condition. Two-story frame house, 10 rooms, good cellar and veranda. Outbuildings: barn 30x90 with basement, hen house, hog house and granary. House and barn watered by two wells. 26 miles from Lake Ontario. Occupied by owner. Reason for selling, ill health of owner. Price \$6,500. Terms, part cash, balance at 5%. There are 5 acres of black muck on this farm. Two canning factories within  $1\frac{1}{4}$  miles. Address Stewart Warren, owner, East Pembroke, N. Y., R. D.

No. 533.—Farm of 45 acres; located  $2\frac{1}{4}$  miles from Akron P. O. and railway station on lines of W. S. & N. Y. C. R. Rs.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches; 2 miles from butter and cheese factory;  $2\frac{1}{2}$  miles from milk station. Population of Akron 1,877, reached by level highway. General surface, level. Altitude, 650 feet. Nature of soil, gravelly loam. Acres in meadow, 10; in pasture, 2; in timber, 2, second growth. Acres tillable, 42. Fruit, 1 acre of apples; 10 cherry, 6 pear, 6 plum and 3 quince trees. Best adapted to general farming and canning factory crops. Fences, wire, good condition. House,  $1\frac{1}{2}$  stories, 7 rooms, good condition. Outbuildings: basement barn 30x42. Tenant house, 1 story, 4 rooms; tool shed 20x40. House watered by drilled well; barns by well; fields by spring. Occupied by owner. Reason for selling, wishes larger farm. Price \$4,500. Terms, \$2,500 cash, balance on mortgage at 6%. Address Jacob Schlogenhau, owner, Corfu, N. Y.

No. 534.—Farm of 22 acres; located 3 miles from East Pembroke P. O. and railway station at Wheatville, on line of W. S. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{4}$  mile from churches; 3 miles from butter factory; 3 miles from cheese factory

and 5 miles from milk station, milk collected at the door. Highways, good. Nearest city, Batavia, population 11,613, 7 miles distant, reached by highway or rail. General surface, level. Altitude, 700 feet. Nature of soil gravelly and black loam. Acres that can be used as meadow, 10. Acres tillable, all. Fruit, 40 apple trees, standard varieties; 6 pear, 3 cherry trees, in bearing, some young peach trees and grape vines. Best adapted to garden crops. Fences, wire, in good condition. House, 2 stories, frame, 10 rooms, no cellar, fair condition. Outbuildings: barn 30x40, poultry house, hog pen, tool shed, fair condition. House watered by well, barns, by well. Occupied by owner. Reason for selling, desires a larger farm. Price \$2,000. Terms cash. Address C. W. Richmond, owner, East Pembroke, N. Y., R. F. D., or Frank E. Horning, broker, East Pembroke, N. Y.

No. 535.—Farm of 50 acres; located  $\frac{1}{2}$  mile from Pembroke P. O. and railway station on line of N. Y. C. R. R.; 60 rods from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{2}$  mile from butter and cheese factory and milk station. Nearest city, Batavia, 8 miles distant, population 11,613, reached by rail or good level highway. Altitude, 650 feet. Nature of soil, gravelly loam. Acres in meadow, 20; in timber, 10, hardwood; acres tillable, 40. Fruit, 2 acres of apples; 45 pear trees; 3 plums; 2 cherry and small fruit. Best adapted to general farming and garden truck. House, 2 stories, 8 rooms. Barn, 30x70, old; usual outbuildings. Occupied by tenant. Reason for selling, owner in other business. Price, \$3,000. Terms, \$2,100 cash, balance on mortgage at 5%. Address Herbert Anderson, owner, 207 Clinton street, Buffalo, N. Y., or Frank E. Horning, agent, East Pembroke, N. Y.

536.—Farm of 88½ acres; located  $\frac{1}{4}$  mile from Corfu P. O., R. D. and railway station on the N. Y. C. R. R.;  $\frac{1}{4}$  mile from school and churches. Milk collected at the door. Highways, State road. General surface, level and well drained. Altitude, 860 feet. Nature of soil, gravel loam. Acres in timber,  $8\frac{1}{2}$ ; acres tillable, 80. Fruit, apples, pears, cherries, plums and peaches. Best adapted to beans; will raise any crop. Fences, wire, in good condition. House, 2 stories, 7 rooms. Outbuildings: barn, 32x120; hen house; ice house; tool house. House

watered by drilled wells, fields, by stream. Occupied by owner. Reason for selling, on account of health. Price, \$6,500 or \$8,500 equipped. House is piped with gas for light and cooking. Address Edward Hunt, owner, R. D., Corfu, N. Y.

No. 537.— Farm of 160 acres; located 2 miles from Corfu P. O., R. D. and railway station on the N. Y. C. R. R.; 2 miles from school and churches. Milk collected at door. Highway, State road. General surface, slightly rolling. Altitude, 880 feet. Nature of soil, gravel loam. Acres in timber, 40; large sugar bush; acres tillable, 120. Fruit, 2 acres of apple orchard, young trees, fall and winter varieties. Adapted to general farm crops. Fences, wire, 400 rods new. Two-story, eight-room, frame house, 22x22, wing, 16x28, new. Outbuildings: barn, 35x70; hen house, hog house, ice house and tool house. Round silo, 16x32, in good condition. House watered by 2 drilled wells, barns by 3 springs, fields by springs. Occupied by tenant. Reason for selling, owner is in other business. Price, \$8,200. Terms, easy. There is a gas lease, \$40 per year. Address Mrs. Lizzie Horning, owner, R. D., East Pembroke, N. Y.

No. 538.— Farm of 181 acres; located 1 mile from Indian Falls P. O. and 3 miles from railway station at Alabama on the West Shore R. R.; 1 mile from school and churches. Highways, good; 25 miles from Buffalo, population, 423,715, reached by rail or highway. Altitude, 860 feet. Nature of soil, sandy loam. Acres in timber, 26; acres tillable, 155. Fruit, 18 acres of apple orchard, mostly Baldwins; 1 pear, 6 cherry, 2 plum trees, 1 acre of peaches, 1 grape vine, strawberries and black raspberries. Best adapted to potatoes, corn, wheat, hay, oats, beans and cabbage. Fences mostly wire in good condition. House, 2 stories, 28x34; wood shed; veranda. Outbuildings: barn, 34x72, with basement of 8 feet, painted; hen house, 14x36; hog house and granary. House watered by two drilled wells; barn, by well; fields, by springs. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$66 per acre. Terms, easy. There is a gas lease on this farm. Address Alva Mileham, owner, Corfu, N. Y.

No. 539.— Farm of 108 acres; located 3 miles from East Pembroke P. O. and

railway station on line of N. Y. C. R. R.; ½ mile from school; 20 rods from churches; ½ mile from butter and cheese factory and 3 miles from milk station. Nearest city, Batavia, population 11,613, 7 miles distant, reached by good, level highway. Altitude, 700 feet. Nature of soil, sand and gravel loam. Acres that can be used as meadow, 30; in timber, 6, hardwood; acres tillable, 102. Fruit, 6 apple trees; 12 cherries; 8 pears; 19 peaches; 3 plums and other small fruit. Best adapted to general farming and garden truck. Fences, wire, good condition. Two houses, one 8-room; one 7-room; 2 stories, in good condition. Outbuildings: barns, 30x40 and 16x30 with lean-to, 18x30; hen house, hog house, tool shed. Occupied by owner. Reason for selling, advanced age. Price, \$9,000, equipped. Terms, \$5,700 cash, balance on mortgage at 6%. Price includes stock and tools. Address E. H. Stone, owner, R. D., East Pembroke, N. Y., or Frank E. Horning, broker, East Pembroke, N. Y.

No. 540.— Farm of 33 acres; located 1½ miles from Corfu P. O., R. D. and railway station on line of N. Y. C. R. R.; 1½ miles from school and churches. Milk collected at door. Highway, State road. General surface of farm, level. Altitude, 840 feet. Nature of soil, lime and sand loam; ½ acre of timber; acres tillable, 32. Fruit, 3 acres of apple orchard; 3 pear, 2 cherry, 1 plum, and 2 peach trees. Adapted to general farm crops. Fences, wire, in good condition. House, 2 stories, 6 rooms, good cellar. Outbuildings: barn, 30x52, hen house, hog house. House and barn watered by well. Occupied by owner. Reason for selling, owner has two small farms and wishes to buy large stock farm. Price, \$4,000. Terms, cash. Address Dan Bauer, owner, Corfu, N. Y., R. D.

No. 541.— Farm of 40 acres; located 1½ miles from Pembroke P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 mile from school and churches. Milk collected at door. Highways, macadam and asphalt. General surface, level. Altitude, 840 feet. Nature of soil, sandy loam. Acres in pasture, 5; acres tillable, 35. Fruit, 4 acres of apple orchard, some cherries, plums and peaches. Adapted to general farm crops. Fences, wire, iron posts. House, 1½ stories, 7 rooms. Outbuildings: barn 28x40, hen house and granary. House

and barn watered by well. Occupied by owner. Price, \$5,125. Two horses, 3 cows, 1 calf, 50 hens, 80 chickens, plow, harrow, cultivator, wagon, etc., included in price. Address Ransom Bacon, owner, R. D., Corfu, N. Y.

No. 542.—Farm of 164 acres; located  $1\frac{1}{2}$  miles from Corfu P. O., R. D. and railway station on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school and churches. Milk collected at door. Highway, State road. General surface, slightly rolling. Altitude, 873 ft. Nature of soil, loam. Acres tillable, 149. Fruit, 8 acres of apple orchard, Baldwins and Spies, 2 acres of pears; 6 cherry, 4 plum and 5 peach trees, currants and all kinds of berries. Best adapted to general farm crops. Fences, woven wire, in good condition. House, 2 stories, 10 rooms, 2 verandas, good cellar, painted. Outbuildings: barn 30x100 with basement, part new, hen house, wagon house, hog house, tool house, granary and silo 18x28. House and barn watered by drilled well 85 feet deep. Occupied by owner. Reason for selling, owner wishes to retire. Price \$16,500 equipped. Terms, easy. Address William Schalz, owner, Corfu, N. Y.

No. 543.—Farm of 74 acres; located 1 mile from Pembroke P. O., R. D. and railway station on the line of N. Y. C. R. R.; 1 mile from school and churches. Milk collected at door. Highway, good. Nearest large village, Akron, population 1,677, 4 miles distant, reached by rail or highway. Surface, slightly rolling. Nature of soil, gravelly loam. Acres in meadow, 20; in timber, 15; acres tillable, 55. Fruit, 1 acre of old orchard; 6 acres of 6-year-old; 4 pear, 150 cherry, 3 plum and 3 peach trees, 9 grape vines, 10 currant bushes and  $\frac{1}{2}$  acre of raspberries. Best adapted to cabbage, potatoes, oats, wheat, rye and peas. Fences, wire, in good condition.  $1\frac{1}{2}$  story, 7 room house. Outbuildings: barn 24x40, hen house, hog house, granary and tool house. House and barn watered by tile well, fields, by stream and springs.

Lake Ontario, 25 miles south. Occupied by owner. Reason for selling, has a larger farm. Price, \$2,500. Terms,  $\frac{1}{2}$  cash. Address John Seborn, owner, R. D., Pembroke, N. Y.

No. 544.—Farm of 24 acres; located  $1\frac{1}{2}$  miles from railway station at Corfu on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school and churches. Milk collected at the door. Highway, State road. General surface, level. Altitude, 900 feet. Nature of soil, sandy loam. Acres in meadow, 8; in pasture, 5; acres tillable, 24. Fruit,  $1\frac{1}{2}$  acres of fall and winter apples, 8 plum, 2 peach, 45 pear and 3 cherry trees. Adapted to general farm crops. Fences, wire, in good condition. House, 2 stories, 7 rooms, in good condition. Outbuildings: barn 16x24, hog house 16x16, and hen house. House and barns watered by wells, 25 miles from Lake Ontario. Occupied by owner. Reason for selling, owner is in other business. Price on application. Address F. E. Horning, owner, East Pembroke, N. Y.

#### TOWN OF STAFFORD

Population 1,288

No. 545.—Farm of 113 acres; located  $2\frac{1}{2}$  miles from Batavia P. O.;  $1\frac{1}{2}$  miles from railway station on line of L. V. R. R.;  $\frac{3}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from milk station. Highways, good, level. General surface, slightly rolling. Altitude, 700 feet. Nature of soil, 25 acres of yellow clay, balance gravel. Acres that can be used as meadow, 20; in natural pasture, 13; in timber, 13; acres tillable, 100. Fruit, enough for home use. Best adapted to general farm crops. Fences, wire and rail. House, 2 stories, 8 rooms. Outbuildings: barns 40x65, 16x24 and other buildings. House watered by wells; barns, by wells, and fields, by well. Occupied by tenant. Price, \$10,000. Terms on application. Address W. S. Spink, owner, 33 Spink avenue, Batavia, N. Y., or Clyde Reece, broker, East Pembroke, N. Y.

#### GREENE COUNTY

Area, 600 square miles. Population, 30,214. Annual precipitation, 42.7 inches. Annual mean temperature, 47.7°. Number of farms, 2,654. County seat, Catskill.

Located in the southeastern part of the state, bounded on the east by the Hudson River.

The surface is rugged and diversified, with the picturesque scenery of the Catskill mountains. A large part of the county is covered with forests. The mountains of Greene County lie in four groups which slope from every side into fertile valleys. Clay loam with occasional deposits of gravel characterize the

farming portion of the county. There are also soils of limestone formation. The county is traversed by the West Shore and the Kaaterskill, Stony Clove and Catskill railroads. During the summer months thousands of tourists and summer residents visit this wonderful region, giving the farmers a ready market for all their farm produce in their home town. While not excelling in any particular crop the yield of the staples is very good: corn, 189,104 bushels; oats, 207,583 bushels; buckwheat, 92,452 bushels; rye, 58,468 bushels; potatoes, 160,133 bushels; hay and forage, 82,748 tons. The domestic animals are reported as follows: Dairy cows, 15,423; horses, 6,174; swine, 8,245; sheep, 9,708; poultry, 124,075. Average value of farm land, \$17.44 per acre and of improved land, \$37.93 per acre. Amount of milk produced, 7,588,116 gallons and the total receipts from dairy products of the eight milk stations in the county, \$711,998. There are 144 district schools in the county and an academy at Catskill; also seven agricultural organizations to promote the farmers' interest. The state has recently bought about 100,000 acres in order to preserve the natural beauty of this historic region.

TOWN OF COXSACKIE

Population 3,620

No. 546.—Farm of 191 acres and 2 acres muck for fertilizer and pond; located  $1\frac{1}{2}$  miles from Climax P. O.; 3 miles from railway station at West Cocksackie, on line of W. S. R. R.;  $1\frac{1}{2}$  miles from school; 2 or 3 miles from churches of all denominations. Roads, few hills, good. Nearest villages, Cocksackie and West Cocksackie, about 3 to 4 miles distant, by highway. Surface, rolling to eastward. Soil, mellow loam. 39 acres of timber, hickory, white oak, rock oak, chestnut and others. Between 300 and 400 apple trees, 100 pear, about 30 plum, and some cherry trees. Can raise rye, oats, corn, buckwheat, potatoes and vegetables of all kinds. Fences, stone, partly good, partly bad. Houses, in fair condition; 1 of 4 rooms, attic and cellar, needs repair; 1 of 9 rooms, 2 cellars. Large barn, with stalls for 4 horses, poor condition. Plenty of timber to build. House watered by spring water piped to door, and well. Fine view of the Hudson River valley, 5 miles distant; Catskill Mountains, 15 miles cross country by wagon road. This farm is in a very beautiful location, with fine view; most excellent place for country residence, or for summer boarding house. Good hunting. Occupied by owner. Reason for selling, death of parents. Price, \$5,000. Terms, cash preferred, or will take \$3,000 cash, remainder on first mortgage. Address C. Doolan, owner, Climax, N. Y., or 56 Elm street, Albany, N. Y.

TOWN OF DURHAM

Population 1,475

No. 547 — Farm of 140 acres; 1 mile from P. O., on line of Catskill Mountain R. R.; 10 miles from railway station;  $\frac{3}{4}$  mile from school and churches;

R. D. 1 from Freehold; 1 mile from creamery. Highways, good, rolling. Nearest village, Durham, 1 mile distant, reached by highway. Occupied by owner. Surface of farm, nearly level. Soil, clay loam, fertile. Acres in meadow, 45; in natural pasture, 85; in timber, 10, hemlock, basswood, elm, hickory and beech; acres tillable, 130. Fruit, 100 apple and 25 pear trees, variety of plums, some peaches. Best adapted to grass, corn and all kinds of grain. Fences, wire and rail, in good condition. House, 12 rooms,  $1\frac{1}{2}$  stories, first-class condition. Barns: 76x30, with basement and stables for 22 cows, 4 horses, box stall; another, 36x30, with basement. Watered, house, by well and cistern; fields, by springs and brook; barn, by cistern. Catskill Mountains and Berkshire Hills visible from lawn. Crystal Lake and others, 8 miles distant. This farm is beautifully located; would make an ideal country residence. Reason for selling, advanced age of owner. Price, \$4,000. Terms to suit buyer. Name and address of owner, O. W. More, Durham, N. Y.

No. 548 — Farm of 154 acres; located  $1\frac{1}{2}$  miles from station on line of W. S. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from Methodist church; 4 miles from butter factory;  $1\frac{1}{2}$  miles from milk station;  $1\frac{1}{2}$  miles from Norton Hill village and skimming station. Highways, good. Nearest village, Oak Hill, population, 500, distant 3 miles, by highway. Surface, level, sloping slightly to south. Good soil, 50 acres of meadow; 20 acres of natural pasture; 8 acres of timber, white oak and pine; 125 acres tillable; 150 apple and 150 pear trees, all first-class varieties. Land adapted to raising of rye, corn and oats. Fences, of stone and wire, in good condition. Comfortable 12-room house,  $1\frac{1}{2}$  stories, 24x36. Good barn, 72x30; sheep

house, 52x18; wagon house, 30x24; granary, 20x16; pig pen, 20x16. House has spring water; barns have water in yard; fields have springs. The Catskill Mountains are 8 miles distant. Direct road from Cocksackie to Oak Hill. Occupied by owner. Reason for selling, owner is too old to work farm. Price, \$4,000. Terms, one-half cash, balance on mortgage. Address Barton Miller, owner, Norton Hill, Greene Co., N. Y. Owner will rent.

## TOWN OF LEXINGTON

Population 1,054

No. 549.—Farm of 122 acres; located 4 miles from Westkill P. O., R. D.; 11 miles from railway station at Shandaken, on line of U. & D. R. R.; 1 mile from school and churches; 7 miles from butter factory. Nature of highways, good. General surface, part level, part rolling. Altitude, 2,000 feet. Nature of soil, loam. Acres in meadow, 60; in pasture, 40; in timber, 22; mostly maple; acres tillable, 35. Fruit, 65 apple, 4 plum and 2 cherry trees; pear, currants and gooseberries. Best adapted to hay, grain and potatoes. Fences, mostly wall, fair condition. House, 9 rooms, large, in good condition. Outbuildings: barn, 30x40; barn and shed combined, 24x43, fair condition. House, barn and fields watered by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,000. Terms, half cash. Will consider renting with option to buy. Address G. W. Butler, owner, Westkill, N. Y., or E. Brionne & Co., agents, 23 Duane St., New York City.

## TOWN OF NEW BALTIMORE

Population 1,936

No. 550.—Farm of 105 acres; located 1½ miles from Grapeville P. O.; 8 miles from railway station at Cocksackie, on line of W. S. R. R. and Hudson River boats; 1 mile from school; 1½ miles from Baptist church; 5 miles from butter factory. Highways, good, partly State road. Nearest large village, Cocksackie, population 2,494, 8 miles distant, reached by highway. Surface of farm, rolling. Soil, good. Acres in meadow, 54; in muck, 5; in natural pasture, 25; in timber, 25, hemlock, pine, chestnut and hard wood; acres tillable, 75. Fruit, 200 apple, a few pear, plum and cherry trees, also 4 acres of huckleberries and strawberries; 25 butternut trees. Best adapted to rye, buckwheat, oats,

potatoes, grass and fruit. Fences, stone and wire, in fair condition. House, 10 rooms and closet, painted, stone cellar, in fair condition. Barns, ample room, in fair condition. Watered, house, by well; barns, by running water; fields, by springs and creek. Pond of 1 acre, 35 to 40-horsepower, 9 miles from Hudson River; 16 miles from Catskill Mountains. Good locality for boarders. Occupied by owner. Reason for selling, poor health. Will sell stock, about 20 head, farming tools, reasonably. It is on mail route No. 1 and is handy to auto bus line, which meets all trains and boats, about 20 miles from Albany. Price, \$4,000. Terms, two-thirds cash, balance to suit purchaser. Address E. D. Stewart, owner, Urlton, Greene Co., N. Y.

No. 551.—Farm of 140 acres, situated 2 miles from Medway P. O., and 5 miles from New Baltimore railway station, on line of W. S. R. R.; R. D. Highways, good. Good soil, adapted to general farming. Acres tillable, 125; acres in timber, 12, chestnut, oak and pine, medium size. Fruit, 75 apple trees and some other fruit. Occupied by tenant. Fences, stone and rail, fair condition. House, 25x45; wing, 18x20, fair condition; 2 barns, shed and carriage house, in medium condition. Watered by spring, stream and pond. Price, \$2,000. Terms, one-third cash, balance easy. Address Burton G. Palmer, owner, Medway, N. Y.

No. 552.—Farm of 60 acres, located 40 rods from Medway P. O. and 5 miles from railway station at Cocksackie, on line of W. S. R. R. Highways, in good condition. Soil, clay, gravel, loam and muck. Best adapted to truck or general farming; 50 acres tillable. Some timber, pine and oak. Fruit, apples, pears and plums, about 300 trees. Fences, mostly stone, good repair. Two large barns. No house. Watered by wells and stream. Reason for selling, to close an estate. Price, \$1,500. Terms, one-half down, balance easy terms. Address Burton G. Palmer, owner, Medway, N. Y.

No. 553.—Farm of 9 acres, located near P. O., 8 miles from railway station at Cocksackie; on line of West Shore R. R.; 1 mile from churches. Highways, good. General surface, rolling. Acres in natural pasture, 2; in timber, 2; small. Acres tillable, 5. Fruit, 10 apple trees, a few pears and plums.

House, 2 stories, good condition. Barn small, in good condition, painted; good poultry house 12x16. House watered by well; barns, by well; fields, by spring. Occupied by tenant. Reason for selling, to settle an estate. Price, \$900. Terms, \$500 cash, balance on mortgage. Address V. E. Clow, owner, Grapeville, N. Y. Owner will rent.

No. 554.—Farm of 194 acres, located 3 miles from Ravena P. O., R. D. 1 and railway station on the West Shore R. R.; 1 mile from school; 3 miles from churches; 5 miles from butter factory; 3 miles from milk station. Nature of highways, good, a little hilly. Nearest city, Albany, population 100,253, 16 miles distant, reached by rail or highway. General surface, part level, some hilly. Nature of soil, gravel loam and

black soil. Acres in meadow, 100; in pasture, 59; in timber, 35, pine and hemlock; acres tillable, 150. Fruit, 800 apple trees 50 pears, some cherries and plums. Best adapted to corn, oats, rye, wheat and potatoes. Fences, stone wall and woven wire. House, 28x42, new, 2 stories, gas and all modern improvements. Outbuildings: barns with stables, 2 large wagon houses, hog house and poultry house for 150 hens. House and barns watered by springs piped into same; fields, by spring and small stream; 4 miles from Hudson river. Occupied by owner. Reason for selling, wishes to retire. Price, \$10,000. Terms, cash preferred or terms made easy. This farm has two tenant houses, cider mill and hay barn. Address Clifton Bedell, owner, R. D., Ravena, N. Y.

## HAMILTON COUNTY

Area, 1,745 square miles. Population, 4,373. Number of farms, 470. County seat, Lake Pleasant.

This county occupies the central portion of the great wilderness region of north-eastern New York.

Its surface is rugged, mountainous, rocky and is mostly covered with forests. Massive ranges of mountains cross each other in various directions. Within the valleys between these mountain ranges are several remarkable chains of lakes, many of them connected by streams affording boat navigation. These lakes are long and narrow bordered by steep banks and high mountain peaks. The waters are clear, cold and pure and discharge in almost all directions. The entire county is included in what is known as the Adirondack Park which also includes a part of Franklin, St. Lawrence, Essex, Warren and Herkimer counties. The region is much visited by the lover of wild scenery and sportsman and the tourist during the summer months. The region abounds in game and the lakes and streams are well stocked with trout. Peat, iron ore, limestone, sand stone and graphite are found. The number of farms reporting domestic animals is 429, dairy cows, 1,183; horses, 816; swine, 377; sheep, 2,515; poultry, 9,884. These figures show that most of the products raised in this county are for the supply of camps, cottages, hotels, and summer tourists. There were raised however, in the valleys, 3,186 bushels of corn, 8,396 bushels of oats, and 46,324 bushels of potatoes. There is perhaps no locality that is of greater interest to a vast number of people of New York State as it affords a health and recreation resort of the most useful and beneficial character to the public. It has fewer farms than any other county of the state, and yet the farm property is valued at \$1,653,827.

### TOWN OF INLET

Population 197

No. 555. Farm of 4 acres, located 1/10 mile from Eagle Bay P. O. and railway station on line of Raquette Lake Railroad; 1 mile from school and churches; 10 miles from milk station. Highways, state road. Nearest large village, Old Forge, 10 miles distant, population 465, reached by rail or highway. General surface, rolling. Altitude, 2,000 feet. Nature of soil, sandy. Acres in timber, 2, virgin forest. Best

adapted to chicken and hog raising. House, practically new, 16 rooms, frame, bath, open fireplace, verandas on three sides. Outbuildings: shed, 20x30; ice house; one room, open, sleeping house. House watered by running water and well. On edge of Fourth Lake of Fulton Chain of lakes in the Adirondack mountains. Occupied by owner. Reason for selling, widow. Price, \$7,500. Terms, easy. Would be ideal place for summer boarders; garbage can be collected from several hotels. Price includes all furniture, bedding, linen, dishes and silver.

Address Mrs. Burdette H. Bowers, owner, 358 Ann St., Little Falls, N. Y.

#### TOWN OF LAKE PLEASANT

Population 458

No. 556.—Farm of 150 acres, located 1,500 feet from Lake Pleasant P. O., 30 miles from Northville on line of F., J. & G. R. R.; 20 miles of this State road, balance building;  $\frac{1}{8}$  mile from school;  $\frac{1}{8}$  mile from Methodist church. Highways, nearly all State road. General surface gently rolling. Altitude, 1,800 feet. Nature of soil, black loam. Acres that can be used as meadow, 50; in natural pasture, 18; in timber, 82; hard

and soft wood, first and second growth. Acres tillable, 50. Best adapted to grain, potatoes, hay and vegetables. Fences, board and wire, good condition. House, 8 rooms and bath, running water, also house of 7 rooms and open fireplace. Outbuildings, barn 30x40, good condition, ice house and wood shed for each house. House watered by running water and well, barns, by well at house. Fields, by brooks. Lake Pleasant, Sacandaga Lake and 20 others within short distance. Occupied by caretaker. Reason for selling, no use for property at present. Price, \$6,000. Terms, easy. Address George McVeigh, Slingerlands. N. Y.

### HERKIMER COUNTY

Area, 1,754 square miles. Population 56,356. Annual precipitation, 50.68 inches. Annual mean temperature, 43.2°. Number of farms, 3,092. County seat, Herkimer.

This county is situated in the northeastern part of the state and is a long, narrow county. It is intersected by the Mohawk and Black Rivers and also drained by the East and West Canada Creeks and the Moose River.

The surface is diversified with high ridges, steep hills, valleys and extensive forests. A large part of the northern portion of the county has the same general features of the other regions of the Adirondacks. The southern part of the county, below the north branch of the West Canada Creek, becomes gently undulating and suitable for agriculture. The soil most commonly found is a yellow clay loam, although in the valleys along the West Canada Creek and the Mohawk River the black slaty loam predominates. The southern party of the county is intersected by the New York Central railroad and the Erie Canal and the northern part by a branch of the New York Central railroad. Electric lines extend from Little Falls through Herkimer to Utica and from Herkimer to Richfield Springs, Otsego county, thus giving ample local markets. The value of all farm property is \$19,607,700, an increase of 30.4 per cent. over the value shown in 1900. The leading crops are corn, 172,573 bushels; oats, 511,560 bushels; barley, 16,699 bushels; buckwheat, 26,793 bushels; potatoes, 520,121 bushels; hops, 15,200 pounds; hay and forage, 190,797 tons. Average price of improved land is \$29.30. Domestic animals reported: Dairy cows, 40,423; horses, 8,213; swine, 9,754; sheep, 2,957; poultry, 134,528; production of milk, 21,747,574 gallons. Total receipts from sale of dairy products, \$2,175,797. There are 92 milk stations and factories in the county, 183 district schools with academies at Herkimer and Little Falls. These with the splendid high schools of the towns and villages offer educational privileges of the highest rank for the residents of the county. The agricultural organizations are made up of a county agricultural society and 20 granges.

#### TOWN OF COLUMBIA

Population 1,071

No. 557.—Farm of 135 acres; located 6 miles from Ilion P. O., R. D. No. 2, 3 miles from railway station at Cedarville on line of D., L. & W. R. R.;  $\frac{1}{4}$  mile from school; 1 mile from Protestant church,  $1\frac{1}{4}$  miles from butter factory and cheese factory; 3 miles from milk station; 8 miles from milk condensing plant. Highways, hilly. Surface of farm, rolling. Soil, clay, good. Acres in meadow, 50; in natural pas-

ture, 65; in timber, 20, maple. Acres tillable, 115. Fruit, apples and pears. Best adapted to corn and potatoes. Fences, wire, good condition. House, 20x30, 2 stories. Outbuildings: basement barn, 30x70; barn, 24x52, good condition; also barn, 20x44. House watered by pump; barns and fields, by pond. Occupied by tenant. Reason for selling, owner in other business. Price, \$6,000. Terms, one-third down, balance on mortgage for term of years. Address Chas. D. Hopkins, owner, Cedarville. N. Y.

No. 558.—Farm of 130 acres, located 6 miles from Richfield Springs P. O., R. D. No. 4, and 2 miles from railway station at Millers Mills on line of D., L. & W. R. R.; 1 mile from school; 1 mile from churches and 2 miles from milk station. Highways, dirt road. General surface, rolling. Altitude, 1,580 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 120; in natural pasture, 8; in timber, 2, maple and beech. Acres tillable, 120. Fruit, 10 apple, 4 plum, 3 cherry trees. Best adapted to potatoes, timothy, clover and alfalfa. Fences, barbed and woven wire. House, in fair condition. Three barns sufficient for all crops, stock and machinery. House watered by well, barns, by water pumped by gasoline engine. Unadilla river starts on rear end of farm. Occupied by owner. Reason for selling, desires a smaller farm. Price, \$4,200. Terms, cash. Address John H. House, owner, Richfield, N. Y.

No. 559.—Farm of 105 acres, located 3½ miles from Ilion P. O. and railway station on line of N. Y. C. R. R.; 1 mile from school; 3½ miles from churches; 3 miles from milk station and 5 miles from condensing plant. Highways, State road within 1 mile. General surface, rolling. Nature of soil, gravel loam. Acres in pasture, 40; in timber, 15. Fruit, 50 apple, 15 plum and 2 cherry trees. Best adapted to general farm crops and fruit. Fences, good. House, large, 10-room, good condition. Outbuildings: dairy barn built this year 32x70, for 26 cows, large poultry house, and several other buildings, all in good condition. House watered by well, barns, by well, fields, by springs. Occupied by owner. Reason for selling other business. Price, \$6,300. Terms, \$2,500 cash, balance on mortgage. All stock and tools can be purchased with the farm at a very reasonable price. Address Francis Ackler, owner, Ilion, N. Y., or W. E. Head, Farm Agency, 114 Arcade Building, Utica, N. Y.

No. 560.—Farm of 241 acres, located 1 mile from South Columbia P. O., R. D. No. 4, and railway station on line of D., L. & W. R. R.; 1 mile from school; 1 mile from church; 3 miles from butter factory; 3 miles from cheese factory; 1 mile from milk station and 3 miles from condensing plant. General surface, level. Nature of soil, limestone. Acres that can be used as meadow, 100;

in natural pasture, 100; in timber, 41, beech and maple. Acres tillable, 175. Fruit, 100 varieties, apples, currants and gooseberries. Best adapted to oats and corn. Fences, wire in good condition. House, large in good condition. Barn 80x40, nearly new. House watered by well, barns and fields, by well. Occupied by owner. Reason for selling, to settle an estate. Price \$10,000. Terms, \$5,000 cash, balance on mortgage. Address John Kayner, administrator, R. D. No. 2, West Winfield, N. Y.

No. 561.—Farm of 165 acres, located 6 miles from Ilion P. O., R. D. No. 2, and railway station, on line of N. Y. C. R. R.; ½ mile from school; 2 miles from Protestant church, butter factory and cheese factory; 4 miles from milk station; 8 miles from milk condensing plant. Highways, hilly. Surface of farm, rolling. Soil, light clay. Acres in meadow, 60; in natural pasture, 60; in timber, 40. Acres tillable, 120. Fruit, apples and pears. Best adapted to corn, potatoes and oats. Fences, wire, fair condition. House, 26x36, 1½ stories; house, 18x24, 1½ stories. Outbuildings: barn, 30x66; stables, 16x66. House watered by pump, fields by creek. Occupied by tenant. Reason for selling, owner living in village. Price, \$5,000. Terms, \$1,500 down, balance on mortgage. Address Chas. D. Hopkins, owner, Cedarville, N. Y. Owner will rent.

## TOWN OF DANUBE

Population 941

No. 562.—Farm of 166 acres, located 1½ miles from Newville P. O., R. D. 5; 5 miles from railway station at Indian Castle on line of W. S. R. R.; 1½ miles from school, churches and cheese factory; 5 miles from milk station. Highways, good. Nearest city, Little Falls, population 12,273, 7½ miles distant, reached by highway. Surface of farm, fairly level. Soil, loam. Acres in meadow, 90; in natural pasture, 90; in timber, 10, hemlock, pine, hardwood. Acres tillable, 150. Fruit, apples. Best adapted to corn, potatoes and grain. Fences, wire, good condition. House, 24x30, fair condition. Outbuildings: barn, 75x30, poor condition. Watered, house, by well; barn, by running water. Occupied by owner. Price, \$3,000. Terms, one-half down, balance on mortgage. Address D. A. Van Allen, owner, Little Falls, N. Y., R. D. 5.

No. 563.—Farm of 160 acres, located  $2\frac{1}{4}$  miles from Frankfort P. O., R. D. No. 4, and railway station on line of W. S. R. R.;  $2\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from churches and condensing plant. Highways, part hilly, but good. General surface, rolling. Altitude, 700 feet. Nature of soil, sandy loam. Acres in timber, 10, second growth. Acres tillable, 125. Best adapted to general farm products. Fences, good. 13-room house, bath and water, fine condition. Outbuildings, barn, several sheds and windmill, all in fine condition. House watered by spring, barns, by spring and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$60 per acre. Terms,  $\frac{1}{4}$  cash, balance on mortgage. Address George H. Davis, owner, Frankfort, N. Y., or Clarence L. Fox, broker, Frankfort, N. Y.

No. 564.—Farm of 56 acres, located  $3\frac{1}{2}$  miles from Frankfort P. O., and railway station on line of W. S. & N. Y. C. R. R.;  $3\frac{1}{2}$  miles from school;  $3\frac{1}{2}$  miles from churches and condensing plant. Highways, good, level. General surface, hilly and rolling. Altitude, 620 feet. Nature of soil, gravelly loam. Acres in meadow, 20; in natural pasture, 26; in timber, 10, second growth, ash and maple. Acres tillable, 20. Fruit, 10 apple trees. Best adapted to market gardening. Fences wire, good condition. House 20x28, fair condition. Barn 25x60, needs some repairs. House watered by spring. Occupied by tenant. Reason for selling, ill health. Price, \$1,200. Terms, one-half cash, balance on mortgage. Address Wayne Davis, owner, Frankfort, N. Y., or Clarence L. Fox, broker, Frankfort, N. Y.

No. 565.—Farm of 19 acres, located  $3\frac{1}{2}$  miles from Frankfort P. O., and railway station on line of N. Y. C. R. R.; 2 miles from school; 2 miles from Methodist church and  $3\frac{1}{2}$  miles from condensing plant. Highways,  $3\frac{1}{2}$  miles of State road;  $\frac{1}{2}$  mile country road, level. General surface, rolling. Altitude, 580 feet. Nature of soil, sandy and gravelly loam. Acres tillable, 19. Fruit, a few apples. Best adapted to market gardening. Fences, wire, good condition. 7 room house, good condition. Good barn, will stable 3 horses and 4 cows. House watered by well, fields, by spring. Occupied by owner. Reason for selling, ill health. Price, \$2,250. Terms, one-half cash, balance on mortgage. Address H. Grants, owner, Frankfort, N. Y., or Clarence L. Fox, broker, Frankfort, N. Y.

No. 566.—Farm of 263 acres, located 3 miles from Frankfort P. O., and railway station on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches and 3 miles from condensing plant. General surface of farm, level. Nature of soil, loam. Acres in natural pasture, 100; in timber, 25; various kinds, some maple. Best adapted to general farming. Fences, wire, in first class condition. House, 11 rooms, in excellent condition. Outbuildings; dairy barn 44x105, with 54 stanchions, horse barn 26x48, wagon house, milk house with concrete tub and running water. House watered by well, barns, by spring, fields, by brooks. Occupied by owner. Reason for selling, other business. Price \$16,000. Terms,  $\frac{1}{4}$  cash, balance on mortgage; price includes 46 cows, 8 yearling heifers, 1 Holstein bull, 5 work horses, 2 colts, 35 hens and all farming implements. Address Herbert B. Clemens, owner, Frankfort, N. Y., R. F. D. No. 3, or W. E. Head Farm Agency, 114 Arcade Building, Utica, N. Y.

No. 567.—Farm of 65 acres, located  $2\frac{1}{2}$  miles from Frankfort P. O., and railway station on line of W. S. R. R.;  $\frac{1}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from milk station and condensing plant. Highways, good. General surface of farm, level. Acres in timber, a small amount. Fruit, 60 apple trees and a few berries. Best adapted to potatoes, corn and garden truck. Fences, rail, good condition. 12-room house in good condition. Outbuildings: horse barn, hog house, poultry house, in good condition. House watered by well. Occupied by owner. Reason for selling, other business. Price, \$6,500, including stock and crops if sold at once. Terms, one-half cash, balance on mortgage. Address Geo. Corddo, owner, R. D., Frankfort, N. Y., or H. H. Ingham, broker, Frankfort, N. Y.

No. 568.—Farm of 22 acres; located  $2\frac{1}{4}$  miles from Frankfort P. O. and railway station on line of W. S. & N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches and  $2\frac{1}{2}$  miles from condensing plant. General surface, level. Altitude, 300 feet. Nature of soil, gravelly. Acres that can be used as meadow, 11; in natural pasture, 4; in timber, small amount; acres tillable, 15. Fruit, apple trees. Best adapted to potatoes and corn. Fences, rail, fair condition. Small house, poor condition. Good barn, 30x40. House watered by well. Occupied by owner. Reason for

selling, ill health. Price, \$700. Terms, \$300 cash, balance on mortgage. Address Agnes Wormouth, owner, Frankfort, N. Y., or H. H. Ingham, broker, Frankfort, N. Y.

TOWN OF GERMAN FLATS

Population 10,190

No. 569.—Farm of 40 acres; located 2½ miles from Ilion P. O., R. D. No. 2, and railway station, on line of W. S. R. R. 1 mile from school; 1 mile from churches; 4½ miles from condensing plant. Highways, good. General surface, rolling. Nature of soil, loam. Acres that can be used as meadow, 25; in natural pasture, 7½; in timber, 7½, small; acres tillable, 33. Fruit, 25 apple trees and some small fruit. Fences, wire, fair condition. House, fair condition. Good sized barn, fair condition. House watered by spring, barns, by spring and fields, by spring. Occupied by owner. Price, \$2,500. Terms, cash. Address, Mrs. Nellie Gorey, owner, Ilion, N. Y.

No. 570.—Farm of 170 acres; located ½ mile from Herkimer P. O., R. D. No. 3, and railway station on line of N. Y. C. R. R.; ¼ mile from school; ¼ mile from churches and 1½ miles from milk station. Highways, State road. Nature of soil, black loam. Acres in timber, 12, hemlock, maple, etc. Fruit, apples and pears. Best adapted to dairying and grain. Fences, wire, in good condition. House, 22 rooms. Outbuildings: cow barn 40x80, horse barn 20x30, hog and poultry house, corn house 16x20. House watered by well and running water, barns, by running water, fields, by spring and brook. Mohawk river and Barge canal pass the house. Occupied by owner. Reason for selling, old age. Price, \$16,000. Terms, \$3,000 cash, balance on mortgage at 6%. Address Adam Darger, owner, Herkimer, N. Y.

TOWN OF LITTLE FALLS

Population 638

No. 571.—Farm of 166 acres; located 7 miles from railway station at Little Falls on line of W. S. Ry.; 50 rods from school and Methodist church; 65 rods from cheese factory; 1 mile from milk station; 7 miles from milk condensing plant. Highways in good condition. Surface of farm, level and rolling. Acres in meadow, 56; in natural pasture, 70; in timber, 6; maple, beech, basswood and hemlock.

Acres tillable, 160. Fruit, good apple orchard, also pears and plums. Best adapted to grass, corn, oats and barley. Fences, cedar post and wire, good condition. House, new, 14 rooms, fine condition. Outbuildings: barn, 36x85; cow barn attached, 125x18. Water in house and barn, fields watered by spring. Occupied by tenant. Price, \$46 per acre or \$55 per acre with tools, crops, etc. Address A. B. Davis, owner, 4 John Street, Ilion, N. Y. Owner will rent.

No. 572.—Farm of 166 acres; located 7 miles from Mohawk or Little Falls P. O., R. D. 3; Mohawk on line of West Shore R. R. and Little Falls on Rome Trolley line and N. Y. C. R. R.; 1¼ miles from milk station. Highways, improved dirt road. General surface, rolling. Acres in meadow, 65; in pasture, 95; in timber, 6, beech, birch, maple and basswood; acres tillable, 160. Fruit, very good apple orchard, few pears and plums. Best adapted to hay, corn and oats. Fences, wire, in good condition. House, painted, in good condition. Outbuildings: barn, 85x36, 18 ft. posts, 2-floor, cow barn attached, 120x17; wagon house, machinery barn, hen house and hog house. Occupied by tenant. Farm is leased with privilege of selling at any time. Reason for selling, owner is in ill health. Price, \$7,500. Terms, \$1,500 down. Address A. B. Davis, owner, 16 John Street, Ilion, N. Y.

TOWN OF MANHEIM

Population 3,355

No. 573.—Farm of 75 acres; located 6 miles from Little Falls P. O., R. D.; 2½ miles from railway station at Dolgeville on line of Little Falls and Dolgeville R. R.; ¼ mile from school and churches; 6 miles from butter factory; 1 mile from cheese factory; 2½ miles from milk station. Highways, State road. Nearest village, Dolgeville, population 2,685. General surface of farm, hilly. Altitude, 700 feet. Acres in meadow, 30; in pasture 45; acres tillable, 65. Fruit, 50 apple trees. Best adapted to corn and oats. Fences, wire, fair condition. House, 20x30, wing, 16x24, fair condition. Barns, 30x40 and 20x30. House and barns watered by city water. Occupied by owner. Reason for selling, death in family. Price, \$1,000. Terms, \$500 cash, balance on mortgage. Address Aaron Spoor, owner, Dolgeville, N. Y.

## TOWN OF NEWPORT

Population 1,490

No. 574.—Farm of 207 acres; located 2 miles from Newport P. O., R. D. 1, and railway station on line of M. & M. R. R.; 1 mile from school and cheese factory; 2 miles from Catholic and Protestant churches and milk condensing plant. Highways, State road. Surface of farm, level. Soil, clay loam. Acres in meadow, 200; in natural pasture, 7. Acres tillable, 200. Fruit, 25 apple trees. Best adapted to hay, grain and dairying. Fences, wire, good condition. House, 2 stories, good condition. Outbuildings: barn, 90x36; horse barn, 26x32. Watered by spring. Price, \$10,000. Terms,  $\frac{1}{2}$  cash. Address Wm. Fitzgerald, owner, Newport, N. Y.

No. 575.—Farm of 79 acres; located 2 miles from Newport P. O., R. D. and railway station on line of Mohawk and Malone R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 2 miles from butter factory, milk station and condensing plant. Population of Newport, 583, reached by State highway. General surface, hilly. Nature of soil, black loam with limestone bottom. Acres in meadow, 30; in pasture, 49; acres tillable, 30. Fruit, 50 apple trees. Best adapted to dairying. Fences, wire, good condition. House, 2 stories, 10 rooms, good condition. Barn, 30x70, silo, all in good condition. Reason for selling, to settle estate. Price, \$4,000. Address George H. O'Connor, owner, Newport, N. Y.

No. 576.—Farm of 195 acres; located 2 $\frac{1}{2}$  miles from Newport P. O., R. D. No. 1, and railway station on line of M. & M. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 2 miles from milk station and condensing plant. Highways, good. Nearest village, Newport, population, 583; 2 miles distant, reached by highway. General surface, level. Nature of soil, clay loam. Acres that can be used as meadow, 95; in natural pasture, 100; in timber, 5, hardwood. Acres tillable, 125. Fruit, 100 apple, 10 plum and 10 pear trees. Best adapted to dairying. Fences, wire, in good condition. Two-story house, good condition. Barn, 100x40 feet, good condition. House and barn watered by spring, fields, by spring and brook. Occupied by owner. Reason for selling, to settle an estate. Price, \$10,000. This price includes the dairy and farming utensils. Address Mrs. James Hawthorn, owner, Newport, N. Y.

No. 577.—Farm of 155 acres; located 2 miles from Newport P. O. R. D., and railway station on line of M. & M. R. R.; 5 rods from school; 2 miles from churches; 2 miles from milk station and 2 miles from condensing plant. Highways, State road. Nearest city, Little Falls, population 12,273, 12 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravel loam. Acres that can be used as meadow, 75; in natural pasture, 80; in timber, 10, hardwood and hemlock; acres tillable, 75. Fruit, 50 apple trees. Best adapted to dairying. Fences, wire and stone wall, good condition. 2-family house, good condition. Outbuildings: 2 barns, 40x50, good condition, with slate roof and basement; 1 horse barn, good condition. House and barns watered by spring, fields by creek. White creek runs through farm. Occupied by owner. Reason for selling, ill health. Price, \$8,000. Terms, \$2,000 cash, balance on mortgage. Address C. D. Smith, owner, Newport, N. Y.

No. 578.—Farm of 37 acres; located  $\frac{1}{2}$  mile from P. O., R. D.;  $\frac{1}{2}$  mile from railway station at Newport on line of M. & M. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches and  $\frac{1}{4}$  mile from milk station and condensing plant. Highways, State road. Nearest village, Newport, population 583,  $\frac{1}{4}$  mile distant, reached by highway. General surface, rolling. Nature of soil, rich loam. Acres that can be used as meadow, 37; acres tillable, 37. Best adapted to hay, corn, grain of any kind. Fences, wire, in good condition. Fields watered by brook. Reason for selling, to settle an estate. No buildings. Price, \$3,500. Terms, easy. Address Bert Hall, owner, Amsterdam, N. Y.

No. 579.—Farm of 132 acres; located 1 mile from Newport P. O., R. D. and railway station, on line of N. Y. C. R. R.; 1 mile from school, churches, butter factory, milk station and condensing plant. Highways, good. Nearest village, Newport, population 583, 1 mile distant, reached by highway. General surface, hilly. Nature of soil, sandy loam. Acres that can be used as meadow, 50; in natural pasture, 82; acres tillable, 50. Best adapted to grazing and poultry raising. Fences, wire, fair condition. There are 5 springs on this farm. Price, \$1,000. Terms to suit purchaser. Address Harry Decker, owner, Little Falls, N. Y.

## TOWN OF RUSSIA

Population 1,772

No. 580.—Farm of 100 acres; located 1 mile from Grant P. O.; 3 miles from railway station at Hinckley on line of N. Y. C. R. R.; 1 mile from school and churches;  $\frac{1}{4}$  mile from cheese factory. Population of Hinckley 586, reached by highway. General surface, level and hilly. Acres in meadow, 50; in pasture, 50; in timber, 1, maple; acres tillable, 75. Fruit, for home use. Best adapted to oats, corn and potatoes. Fences, rail, board and wire. House, fair condition, large. Outbuildings: 3 good sized barns, hog house, corn crib, large store house, all fair condition. House watered by well, barns and fields, by brook. Occupied by owner. Reason for selling, advanced age. Price, \$3,000. Terms, \$1,000 cash, balance to suit purchaser. Address R. H. Popper, owner, Grant, N. Y.

No. 581.—Farm of 200 acres; located 4 miles from railway station at Hinckley on line of Mohawk and Malone R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from churches; 3 miles from cheese factory and 4 miles from milk station. Highways, some small hills. General surface, mostly level. Altitude, 1,240 feet. Nature of soil, sandy loam. Acres than can be used as meadow, 150; in natural pasture, 20; in timber, 30, maple and beech. Acres tillable, 150. Fruit, some apple trees. Best adapted to corn, oats, potatoes, hay, berries and all kinds of gardening. Fences, wire, needs new fences. Large 12-room house, in fair condition. Outbuildings: large basement barn, stable for 20 cows and 4 horses, other buildings. House and barns watered by well and cistern, fields, by never failing springs and brook. Managed by occupant of adjoining farm. Reason for selling, other business. Price, \$2,300. Terms, \$600 cash, balance on mortgage. Address Douglas Smith, owner, 100 Young Place, Utica, N. Y., or George P. Smith, broker, Hinckley, N. Y.

No. 582.—Farm of 200 acres; located 5 miles from Poland P. O., R. D. No. 1;  $2\frac{1}{2}$  miles from railway station at Gloversville, on line of N. Y. C. R. R.; 2 miles from school; 2 miles from cheese factory;  $2\frac{1}{2}$  miles from milk station and 9 miles from condensing plant. Highways, good. Nearest village, Poland, population 366, 5 miles distant,

reached by rail or highway. General surface, rolling. Altitude, 1,225 feet. Nature of soil, both heavy and light. Acres that can be used as meadow, 100; in natural pasture, 75; in timber, 25, maple and beech; acres tillable, 150. Fruit, apples and plums. Best adapted to hay, oats, corn, potatoes, buckwheat and rye. Fences, wire, in good condition. Eight-room house, in fair condition. Outbuildings: cow barn 30x50, fair condition, horse barn 30x60, basement under both, barn 30x40. House watered by running water, barns, by water in tank, and fields, by brook. Occupied by owner. Reason for selling, ill health. Price, \$7,000. Terms, easy. Address Mrs. Lillias Forrest, owner, R. F. D., Poland, N. Y.

No. 583.—Farm of 152 acres; located  $\frac{1}{2}$  mile from Grant P. O.; 4 miles from railway station at Hinckley on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school and churches;  $1\frac{1}{2}$  miles from cheese factory. Population of Hinckley, 586, reached by State road. General surface, pastures rolling, meadow, flat and level. Altitude, 1,220 feet. Nature of soil, loam. Acres in meadow, 60; in pasture, 90; in timber 10, spruce and hardwood. Acres tillable, 75. Fruit, 10 apple trees. Best adapted to grass, oats, corn, barley and buckwheat. Fences, wire, fair condition. House, 12 rooms, in good condition. Outbuildings, cow barn 28 x 75 with basement, horse barn 24 x 40 with basement, shop 20 x 30, hay barn, poultry house. House and barns watered by running water, fields, by springs. Black creek  $\frac{1}{2}$  mile distant. Farm on banks of Hinckley reservoir. Occupied by owner. Reason for selling, ill health. Price, \$5,500. Terms easy. Address, George Garlock, owner, Grant, N. Y.

## TOWN OF SALISBURY

Population 1,468

No. 584.—Farm of 200 acres; located 5 miles from Little Falls, P. O. R. D. No. 1; 6 miles from railway station, on line of N. Y. C. R. R.; school on property; 2 miles from Presbyterian church; 3 miles from cheese factory and 7 miles from milk station. Highways, good country road and State road. General surface of farm, rolling. Nature of soil, good. Acres in meadow 100, in natural pasture, 75; acres tillable, 190. Best

adapted to potatoes, hay, corn and oats. Fences, barbed wire, in excellent condition. House, 9 rooms and large hall, in good condition. Outbuildings, cow barn, hay barn, with silo, very good condition, horse barn, good condition, three other buildings, small, fair condition. Watered, house, piped from spring, barns same, fields by springs. Occupied by tenant. Reason for selling, other business. Price, \$65 per acre. Terms, cash. Address J. Kirby Burrell, owner, 17 Wall St., New York City; Rogers & Ash, Brokers, Little Falls, N. Y.

## TOWN OF WARREN

Population 1,071

No. 585.— Farm of 107 acres; situated in the vicinity of Warren P. O. and Richfield Springs station, on line of D. L. & W. R. R. Loamy soil, adapted to general farming and stock raising. Some fruit; 25 acres timber; 40 acres meadow; 50 acres tillable. House, barns and outbuildings sufficient for farm and in good repair. Well watered. Fairly fenced. Price, \$2,400. Margaret Crouse, owner, Richfield Springs, N. Y., R. D.

## JEFFERSON COUNTY

Area, 1,868 square miles. Population, 80,382. Annual precipitation, 40.38 inches. Annual mean temperature, 48.2°. Number of farms, 5,778. County seat, Watertown.

This county is located in the northern part of the state, bounded on the north-west by the St. Lawrence River and on the west by Lake Ontario. The Black and Indian Rivers traverse the county affording abundant water power which has not yet been very greatly developed.

The surface is diversified with gentle undulations, abrupt terraces and deep ravines. Along Lake Ontario and the St. Lawrence River the soil is the same gravelly alluvium found near the shore of the other lake counties. Further inland the surface is generally level or gently undulating. On the second level ranging from 600 to 900 feet above the lake the surface is more rolling and the soil becomes a rich, clay loam. Southeast of this, and extending into Lewis County, the surface is hilly and diversified with deep ravines and abrupt terraces. Clay loam soil still predominates, but much black loam is found. A large part of the county is covered with forest in which ash, oak, pine, hemlock, beech, spruce and sugar maple are found. The well-known Potsdam sandstone is found in this county and also extensive deposits of iron ore.

The following crops were reported: Corn, 240,800 bushels; oats, 2,050,568 bushels; barley, 80,141 bushels; buckwheat, 32,950 bushels; dry beans, 15,632 bushels; potatoes, 789,027 bushels; hay and forage, 341,544 tons. The value of all farm property is \$40,095,331, an increase of 27.6 per cent over the census of 1900. The average value of improved land in the county is \$43.13 per acre. Domestic animals; dairy cows, 64,855; horses, 17,746; swine, 19,818; sheep, 12,059; poultry, 230,378. Total production of milk, 32,881,485 gallons and the total receipts from the sale of dairy products, \$3,287,056. The county is intersected and traversed in several directions by the R., W. & O. railway lines and trolley lines, giving ample transportation facilities. Watertown, a great railroad center, is the headquarters of the Watertown Produce Exchange, the greatest cheese market in the United States. Along the St. Lawrence shore are located many large hotels and cottages which accommodate the thousands of tourists who annually visit the Thousand Islands, thus a great local market is had for all farm produce. There are 347 district schools in the county with academies at Watertown and Carthage; 168 dairy stations and factories furnish nearby market for milk. There are two county fair societies, one Holstein-Friesian breeder's club, one Patron of Industry, three subordinate granges and one Pomona grange, all organized and worked for some one or more agricultural interest.

## TOWN OF ALEXANDRIA

Population 4,259

No. 586.— Farm of 240 acres; located 2½ miles from Alexandria Bay P. O., R. D. 1; 6 miles from railway station, on line of N. Y. C. R. R.; 1½ miles

to trolley line; ¼ mile from school; 2½ miles from churches; 2¼ miles from butter factory and cheese factory; 6 miles from milk station. Highways, State road. Several parks and summer homes of wealthy people near this farm, so there is a good market. The nearest

large village is Alexandria Bay, located on the St. Lawrence River, a great summer resort for tourists. Surface of farm, rolling. Soil, clay and clay loam. Acres in meadow, 135; in natural pasture, 75; in timber, 30, elm, ash, maple, etc. Acres tillable, 175 to 200. Fruit, some apples and cherries. Best adapted to hay, grain and vegetables. Fences, stone wall, rail, post and wire, good condition. House, 20x30, with wing 14x32. Outbuildings, ample for size of farm. Watered, house, by water piped, barns, by pump, fields, by springs and creek. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$40 per acre. Terms, from 50% to 75% can remain on mortgage at 5%. Farm can also be purchased on contract by paying 10% at time of taking possession. Address T. F. Kavanaugh, owner, Alexandria Bay, N. Y. Owner will rent for cash or on shares.

## TOWN OF CLAYTON

Population 4,028

No. 587.—Farm of 153 acres; 4 miles from Cape Vincent station and 10 miles from Clayton P. O. This farm is located on Carlton island. Has 1 mile shore front on St. Lawrence River. All fine farming land. House, 2 stories, 20x40, with wing, in good repair. Barn, 40x80; stable for 30 cows, new creamery with ice house, gas engine and feed mill, in good condition. Granary, chicken house and hog house. Watered by St. Lawrence River. Price, \$75 per acre. Terms, \$2,000 cash, balance on time. Name and address of owner, F. L. Hall, Clayton, N. Y. Owner will rent on shares.

## TOWN OF ELLISBURG

Population 3,634

No. 588.—Farm of 179 acres; located 1½ miles from Pierrepont Manor P. O., R. D. 1; 2 miles from railway station, at Pierrepont Manor, on line of R., W. & O. R. R.; 1½ miles from school and Protestant churches; 2 miles from cheese factory and milk station. Highways, somewhat hilly. Surface of farm, rolling. Altitude, about 600 feet. Acres in natural pasture, 50; in timber, 10, maple, beech and basswood. Acres tillable, 113. Fruit, 2 apple orchards. Best adapted to corn, hay, oats, buckwheat and potatoes. Fences, barbed wire. House, 14 rooms, good condition. Outbuildings, not modern, but in good repair: horse barn, 26x36; corn house,

12x18; hen house, 10x30; silo, 16x26. Watered by well and cistern. Reason for selling, to close an estate. This farm is 20 miles from Watertown, which has a population of 26,730; 9 miles from Adams and ¼ mile from small school. Price, \$6,000. Terms, \$4,000 down, balance on mortgage at 5%. Address Mrs. J. B. Hibbard, owner, 209 N. Washington St., Rome, N. Y.

No. 589.—Farm of 96 acres; located 2½ miles from Mannsville P. O., R. D. 2, and railway station on line of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches; 2½ miles from milk station, cheese and butter factory. Highway, good. General surface, rolling. Altitude, 200 feet. Nature of soil, gravelly loam; acres tillable, 85; acres in timber, 7, maple. Fruit, apples, pears, plums and currants. Best adapted to corn, oats and barley. Fences, stone and wire, in good condition. House, nearly new, 10 rooms, two stories. Barn, 36x55, basement stable. House and barn watered by well, fields by three creeks; 5 miles from Lake Ontario. Occupied by tenant. Reason for selling, owner is not a farmer. Price, \$3,500. Terms, \$1,000 down, easy payments for balance. Will consider renting with option to buy. Address A. B. Schuyler, owner, Adams, N. Y.

## TOWN OF HOUNSFIELD

Population 2,217

No. 590.—Farm of 100 acres; 1½ miles from Sacket Harbor P. O., R. D. No. 1; 50 rods from railway station at Chamberlains Crossing, on line of N. Y. C. & H. R. R. R.; ¼ mile from school; 1½ miles from Presbyterian, Catholic and Methodist churches; ½ mile from butter and cheese factory. Highways, level, good stone road. Nearest large village, Sacket Harbor, population, 800, 1½ miles distant, reached by rail or highway; trains stop at crossing within 50 rods from farm. Soil, clay loam. Acres in meadow, 30; in natural pasture, 40; in timber, ½, maple and elm; acres tillable, 85. Fruit, 15 apple trees. Best adapted to hay, corn, oats, barley, etc. Fences, barbed wire, woven wire and rail, in good condition. House, stone, 12 rooms, in excellent condition. Barns, storage house, 25x15; horse barn, 30x36, for 7 horses; cow barn, for 35 cows; silo, 150 tons, all in good condition. Watered, house, by well, barns, by well, fields, by well and creek. This farm is

1½ miles from Lake Ontario and Mill Creek runs through the farm. Occupied by tenant. Reason for selling, other business. Price, \$6,500. Terms, one-half cash, balance on mortgage, 5½%. Address R. W. Harris, owner, Sacket Harbor, N. Y.

#### TOWN OF LE RAY

Population 2,555

No. 591.—Farm of 270 acres; located 3 miles from Evans Mills P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 mile from school and 3 miles from churches; 3 miles from butter factory; 1 mile from cheese factory. Highways, clay and gravel. Nearest city, Watertown, population 26,730, 13 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, clay loam. Acres in meadow, 75; in pasture, 85; in timber, 30, maple, hemlock and basswood; acres tillable, 240. Best adapted to hay and grain. Fences, wire. House, 2 stories, 24x30, with ell for kitchen. Outbuildings, hay barn, 54x30; cow barn, 36x60, with ell 36x76; new silo, 16x30. Wind mill and tank; horse barn, 24x30; granary; hog house and tool house. House watered by drilled well, barns, by same, fields, by Indian River. Occupied by tenant; Reason for selling, age of owner. Price, \$55 per acre. Terms, \$2,000 down, balance on mortgage. Address W. H. Reese, owner, Evans Mills, N. Y.

No. 592.—Farm of 270 acres; located 3 miles from Evans Mills P. O., R. D. and railway station on line of N. Y. C. R. R.; 3 miles from butter factory; 1 mile from cheese factory; 3 miles from milk station. Highways, good. Nearest city, Watertown, 13 miles distant, population 26,730, reached by rail and highway. General surface, gently rolling. Nature of soil, clay loam. Acres in meadow, 85; in pasture, 70; in timber, 30, maple; acres tillable, 240. Best adapted to hay, grain and corn. Fences, wire, in good condition. House, 24x32, with ell, 18x26; also tenant house. Outbuildings, hay barn, 36x60, 22 ft. posts; cow barn, 54x34, with ell, 36x74, stanchions for 40 head of cattle; horse barn, 24x30; 2 granaries; silo, 16x30, new; hog house; another barn, 30x40. House watered by drilled well and windmill, barns, by same, fields, by Indian River. Occupied by tenant. Lease expires March 1st of every year. Price, \$55 per acre. Terms, \$2,000 down, bal-

ance to suit purchaser. Address W. H. Reese, owner, Evans Mills, N. Y.

#### TOWN OF LOBBRAINE

Population 940

No. 593.—Farm of 130 acres; located 4 miles from Adams P. O., R. D. and railway station on line of Rome, Watertown & Ogdensburg R. R.; 1 mile from school; 1½ miles from railway station; 1½ miles from butter and cheese factories; 4 miles from milk station and condensing plants. Nearest village, Adams, population 1,458, 4 miles distant, reached by State road. General surface of farm, rolling. Altitude, 300 feet. Nature of soil, sandy loam. Acres in meadow, 50; in pasture, 50; in timber, 30, maple sugar bush and saw timber; acres tillable, 80. Fruit, 20 apple trees and small fruit. Best adapted to potatoes and garden truck. Fences, barbed wire, good condition. House, 26x36, good condition. Outbuildings: horse barn, 30x14, cow barn, 30x40, granary, 12x10, fair condition, wood house, 12x20, good condition. House and barn watered by wells. Occupied by tenant. Reasons for selling, to settle estate. Price, \$1,850. Terms, \$300 down; balance easy at 5%. Price includes 25 tons of hay. Address H. M. Brown Estate, Adams, N. Y.

No. 594.—Farm of 180 acres; located 5 miles from Adams P. O., R. D. No. 2: 3½ miles from Pierrepont Manor railway station on line of Rome, Watertown & Ogdensburg R. R.; 1½ miles from school; 2½ miles from churches; 2½ miles from butter and cheese factory; 3½ miles from milk station and condensing plant. Population of Adams 1,458, reached by good highway. General surface, rolling. Altitude, 350 feet. Nature of soil, gravelly loam. Acres in meadow, 60; in pasture, 70; in timber, 50, basswood, hemlock, maple and beech; acres tillable, 100. Best adapted to hay, oats, corn and potatoes. Fences, mostly barbed wire, good condition. House, 8 rooms, fair condition. Barn, 54x50, fair condition. House watered by well, barn and fields, by well and creek. Occupied by tenant. Reason for selling, to settle estate. Price, \$15 per acre. Terms, \$500 cash, balance on mortgage at 5%. Price includes 30 tons of hay. This farm has saw timber, estimated to be about 100,000 feet, owners will sell farm without timber for \$12 per acre. Address H. M. Brown Estate, Adams, N. Y.



STARTING IN THE BUSINESS YOUNG.



NEW YORK STATE DAIRY CATTLE.





## TOWN OF LYME

Population 1,955

No. 595.—Farm of 108 acres; located  $3\frac{1}{2}$  miles from Chaumont P. O., and railway station, on line of N. Y. C. & H. R. R. R.;  $\frac{1}{2}$  mile from school;  $3\frac{1}{2}$  miles from Methodist, Presbyterian and Catholic churches;  $3\frac{1}{2}$  miles from cheese factory and milk station. This farm is located on Cherry Island,  $\frac{1}{2}$  mile from mainland. Nearest village, Chaumont, population 708,  $3\frac{1}{2}$  miles distant, reached by boat and highway. Surface of farm, nearly level. Altitude, 300 feet. Soil, clay loam. All in meadow and grain. Nice trees along shores, of elm and oak; acres tillable, 105. Fruit, few cherry trees. Best adapted to hay, alfalfa, oats, corn, wheat, etc. Houses, 2 moderate sized summer cottages. Outbuildings: basement barn, 36x70; hay barn, 30x40; ice house, granary, in good condition. Watered, house, by well, fields, by Chaumont Bay. This is an ideal summer home. Occupied by owner. Reason for selling, wishes money to invest in manufacturing interests. Price, \$15,000. Terms, cash, or \$10,000 cash, balance on mortgage. Address The Adams & Duford Co., owners, Chaumont, N. Y. Owners will rent.

No. 596.—Farm of 1,400 acres; located 3 miles from Chaumont P. O.; 4 miles from railway station at Chaumont on line of N. Y. C. & H. R. R. R.;  $1\frac{1}{2}$  miles from school; 4 miles from milk station;  $\frac{1}{2}$  mile from cheese factory. Highways, good. Nearest village, Chaumont, population 708, 4 miles distant, reached by highway. Surface of farm, rolling. Altitude, 300 feet. Soil, clay loam and black muck. Acres in meadow, 125; in natural pasture, 800; in timber, 100, cedar and hardwood; acres tillable, 600. Best adapted to hay, corn, oats, wheat, barley, potatoes, alfalfa, etc. Fences, wire, in good condition. Houses, 1 new farm house, 1 old farm house, in good condition. Outbuildings, 2 large dairy barns, with basement stables, well lighted, stable room for 80 head cattle; 2 new silos, 16x32; other ample hay barns and outbuildings. Watered, house and barns by wells, fields, by springs and creeks. This farm borders on Chau-

mont River. Reason for selling, wishes to invest capital in manufacturing business. Price, \$22.50 per acre. Terms, cash. Address The Adams & Duford Co., owners, Chaumont, N. Y.

No. 597.—Farm of 250 acres; located 2 miles from Chaumont P. O., and railway station, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from Methodist, Presbyterian and Catholic churches; 2 miles from cheese factory and milk station. Highways, good. Nearest village, Chaumont, population, 708, 2 miles distant, reached by highway. Surface of farm, rolling. Altitude, 300 feet. Soil, clay loam and black muck. Acres in meadow, 30; in natural pasture, 220; timber cut off and ready to clear up for new land; acres tillable, 125. Best adapted to hay, oats, barley, corn, potatoes, etc. Fences, wire, in good condition. No house. Barn, 30x60, in good condition. Watered, barn, by well, with windmill pump. This farm is  $\frac{1}{2}$  mile from Chaumont River. Occupied by tenant. Reason for selling, wishes to invest money in manufacturing business. Price, \$20 per acre. Terms, cash. Address The Adams & Duford Co., owners, Chaumont, N. Y.

## TOWN OF WORTH

Population 597

No. 598.—Farm of 100 acres; 8 miles from Adams P. O., R. D. 1; 100 rods from church. Highways, in excellent condition. Soil, gravel and clay loam. Acres, meadow, 55; pasture, 40; timber, 5. House, 16x24. Barns, recently burned. Sufficient timber on place to furnish material for new barn. Watered by 2 creeks and spring. Fences, wall and rails, well fenced all around and cross fences. This is a fine farm and will be sold very cheap on account of loss of barns. Price, \$1,800. Terms, \$1,000 down and the balance to suit purchaser. Has 51 acres more for sale, located  $1\frac{1}{4}$  miles from above described farm. Will sell all together or separate. Land well watered by spring and running brook. Good barn, 28x38. No house. Will take \$20 per acre. Terms, one-half down. Will also sell store with farm, if desired. Address Daniel Groves, owner, Adams, N. Y. Owner will rent.

## LEWIS COUNTY

Area, 1,288 square miles. Population, 24,849. Annual precipitation, 36.79 inches. Annual mean temperature, 45.1°. Number of farms, 3,343. County seat, Lowville.

This county is situated north of the Mohawk Valley in the north central part of the state. It is drained by the Black, Beaver, Moose and Oswegatchie Rivers. The surface is hilly and broken except along the Black River which flows through the center of the county from south to north. Along this wide valley the soil is of a rich limestone formation and the surface is gently rolling with some level tracts. To the east of these the land rises in abrupt broken hills to an elevation in some places of 1,200 feet above the valley. The hills are covered with forests of sugar maple, pine, spruce, birch, hemlock and other trees, and are too rough for cultivation. In the western portion of the county the hills are mostly long sloping ridges with fertile clay loam soils. Trenton limestone is found in parts of the county. Agriculture is the chief industry. The principal products are corn, 37,522 bushels; oats, 668,966 bushels; barley, 41,283 bushels; potatoes, 627,771 bushels; hay and forage, 156,063 tons. Farm property reaches a total valuation of \$16,288,674, an increase of 24.7 per cent. in the past ten years. The average price of improved land per acre is \$28.16. Farms report the following domestic animals: Dairy cows, 36,291; horses, 8,037; swine, 12,256; sheep, 5,225; poultry, 98,569. Milk produced, 18,435,828 gallons. Total receipts from the sale of dairy products is \$1,611,947. The county is thoroughly well equipped with transportation facilities. There are 208 district schools; 106 stations and factories where milk finds a ready market; an agricultural society which holds an annual fair; twenty-one granges and one Pomona grange. The production of cheese of all kinds is very large.

## TOWN OF DENMARK

Population 1,889

No. 599.—Farm of 163 acres; 2 miles from Copenhagen P. O., R. D., and railway station on line of C. & C. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches of all denominations, butter and cheese factory and condensing plant. Highways, State road. Nearest city, Watertown, population 26,730, 12 miles distant, reached by rail or highway. Surface of farm, part level and part slightly rolling. Altitude, 1,200 feet. Soil, clay loam. Acres in meadow, 105; in natural pasture, 60; in timber, 25, mostly maple and beech; acres tillable, 125. Fruit, 60 apple trees, plums and cherries. Best adapted to hay, corn, oats, potatoes, etc. Fences, wire, in fair condition. House, 14 rooms, in fine condition. Barn, 42x90, with ell, 30x42; pig pen, 16x24; tool house, 18x30. Watered, house, by well and cistern; barns, by spring; fields, by springs and brook. This farm is 2 miles from Deer River and Pleasant Lake. There is a sugar bush of 1,000 trees on this farm, also all implements necessary in making maple sugar. Reason for selling, dissolving partnership. Price, \$8,000. Terms, \$3,300 cash, balance on mortgage at 5%. This price includes all stock, farming implements, hay and grain on hand. Address Henry Rogers, owner, Copenhagen, R. D. 2, N. Y.

No. 600.—Farm of 50 acres; located  $1\frac{1}{2}$  miles from Castorland P. O. and railway station on line of N. Y. C. R. R.; 1 mile from school and churches;  $1\frac{1}{2}$  miles from cheese and butter factory, milk station and condensing plant. Nearest large village, Lowville, population 2,940, 6 miles distant, reached by good highway. General surface of farm, level. Altitude, 700 feet. Nature of soil, loam. Acres that can be used as meadow, 30; in pasture, 20; acres tillable, 45. Fruit for family use. Best adapted to general farm crops. Fences, good. House, 9 rooms, in good condition. Barn, 70x40, concrete basement. House and barn watered by well; fields, by springs. Reason for selling, owner owner in other business. Price, \$2,500. Terms, half cash, balance on mortgage at 5%. Address Frank E. Brakner, owner, Lowville, N. Y., or Henry F. Weber, agent, 100 State st., Lowville. N. Y.

No. 601.—Farm of 96 acres; located 5 rods from Denmark P. O. and 1 mile from railway station at Deer River on line of N. Y. C. R. R.; 10 rods from school and churches; 5 rods from butter and cheese factory; 1 mile from milk station. Nature of highway, State road. General surface,  $\frac{3}{4}$  level, the remainder sloping towards east. Nature of soil, loam. Acres in meadow, 50; in pasture, 35; in timber, 11, mostly sugar maples.

some birch and beech; acres tillable, 85. Fruit, 20 good apple trees, few plums. Best adapted to general farm crops. Fences, good. House, 8 rooms. Outbuildings: barn, 80x42; wagon and store house. House, barn and fields watered by running spring. Black River  $1\frac{1}{2}$  miles, Deer River 1 mile distant. Occupied by owner. Reason for selling, ill health. Price, 6,000. Terms, \$2,500 mortgage, balance cash. Price includes 12 cows, hay and straw. Address Leon C. Sheldon, owner, Denmark, N. Y., or Henry F. Weber, agent, 100 State St., Lowville, N. Y.

## TOWN OF HARRISBURG

Population 686

No. 602.—Farm of 112 acres; located 7 miles from Lowville P. O., R. D. 2, and railway station, on line of N. Y. C. R. R.; 1 mile from school and churches; 2 miles from butter factory and cheese factory; 7 miles from milk station and milk condensing plant. Highways, part State road. Surface of farm, rolling. Altitude, about 1,000 feet. Soil, clay loam. Acres in meadow, 42; in natural pasture, 50; in timber, 20, spruce, hemlock, basswood, maple, birch and beech; acres tillable, 90. Fruit, apples. Adapted to grain, hay, corn, potatoes, etc. Fences, in good condition. House, 6 rooms, good condition. Outbuildings: good barn, 30x40, with basement. Watered, house and barn, by running water; fields, by creek. Occupied by owner. Reason for selling, death of owner's wife. Price, \$2,500. Terms, \$500 cash, balance on bond and mortgage at 5%. Address Michael Thomas, owner, Lowville, N. Y., or Henry F. Weber, agent, Weber Block, Lowville, N. Y.

## TOWN OF HIGH MARKET

Population 409

No. 603.—Farm of 270 acres; located 4 miles from Constableville P. O., R. D. No. 1; 9 miles from railway station at Lyons Falls on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from butter factory; cheese factory located on farm; 9 miles to milk station. Highways, mostly State road. Nearest village, Boonville, population 1,794, 12 miles distant. General surface, sloping, some level. Altitude, 1,800 feet. Nature of soil, dark loam. Acres in meadow, 125; in pasture, 130; in timber, 15, mostly hardwood; acres tillable, 125. Best adapted to hay, grain, potatoes and corn. Fences, stone

wall and wire, in good condition. House, 14 rooms, good condition. Outbuildings: 3 barns, horse barn, 36x45; cow barn, No. 1, 95x50; No. 2, 36x45. House watered by running water. Barns and fields, by running water. Occupied by tenant. Price, \$10,000. Price includes 100 tons of hay, cheese factory, equipped, 25 tons of straw. Address Mrs. G. Plummer, owner, Constableville, N. Y.

## TOWN OF LYONSDALE

Population 1,007

No. 604.—Farm of 411 acres; located 6 miles from Port Leyden P. O., R. D. No. 1; 5 miles from railway station at Lyons Falls, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 5 miles from churches; 2 miles from cheese factory and 5 miles from milk station. Highways, good. General surface, fairly level. Altitude, 600 feet. Nature of soil, sandy loam. Acres in timber, 300, spruce, pine, poplar, maple and beech; acres tillable, 100. Best adapted to potatoes and oats. Fences, poor condition. Houses, one 5-room, poor condition and one 8-room, good condition. Barn 30x40, fair condition. House watered by well, springs and brook; Moose river, 1 mile distant. Occupied by tenant. Reason for selling, to settle an estate. Price, \$5 per acre. Terms, cash. Address E. Darwin Benedict, Administrator, Fayetteville, N. Y.

## TOWN OF MARTINSBURG

Population 1,546

No. 605.—Farm of 185 acres; 6 miles from Lowville P. O., R. D. 5, and railway station on line of N. Y. C. & H. R. R. R.;  $\frac{3}{4}$  miles from school;  $\frac{3}{4}$  to 2 miles from Methodist and Presbyterian churches;  $\frac{3}{4}$  mile from butter and cheese factory; 2 miles from milk station and condensing plant. Highways, new State road. Surface of farm, level and some rolling. Altitude, 1,000 feet. Soil, loam. Acres in meadow, 60; in natural pasture, 100; in timber, 20, pine, spruce, hemlock, beech and maple. Acres tillable, 160. Fruit, good apple orchard. Best adapted to all kinds of crops. Fences, good. House, 8 rooms, in good condition. Barn, 40x120, in good condition. Watered: house by well, fields by springs. This farm is 2 miles from Black River. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$8,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 5%. Address George J. Kilham, owner,

Lowville, N. Y., or Henry F. Weber, agent, Weber Block, Lowville, N. Y.

No. 606.—Farm of 116 acres; located 2 miles from Glenfield P. O., R. D. and railway station, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 1 mile from butter and cheese factory; 2 miles from milk station. Highway, mostly State road. General surface, part level, slightly rolling. Nature of soil, loam. Four acres of timber, maple, 150 sugar trees; acres tillable, 112. Fruit, 25 good apple and plum trees. Best adapted to general farm crops. Fences, good. House, 8 rooms. Outbuildings: 2 barns, 40x60 and 30x40. House watered by well, barns, by spring, fields, by spring; 2 miles from Black River. Occupied by owner. Reason for selling, other business. Price, \$8,700. Terms, \$4,000 cash, balance on mortgage at 5%. Price includes 15 cows, 2 heifers, 1 bull, 2 horses, harness, wagons, sleighs and all farm tools complete. Address Elmer Tiffany, owner, Glenfield, N. Y., or Henry F. Weber, agent, 100 State St., Lowville, N. Y.

No. 607.—Farm of 230 acres; located 2 miles from Martinsburg P. O.; 4 miles from railway station at East Martinsburg, on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 2 miles from butter and cheese factory; 4 miles from milk station and condensing plant. Nearest village, Lowville, population, 2,940, 5 miles distant, reached by State road. General surface of farm, some rolling, mostly level. Altitude, 1,000 feet. Nature of soil, loam. Acres in pasture, 50; in timber, 20; acres tillable, 175. Fruit, for home use. Best adapted to general farm crops. Fences, good. House, frame, 8 rooms. Barn, 95x30, good condition. House and barn watered by well and spring, fields, by springs. Occupied by owner. Reason for selling, to settle estate. Price, \$4,500. Terms, \$1,500 cash, balance on mortgage at 5%. Price includes 7 cows, 5 heifers, 3 yearlings, bull, hay and straw, all kinds of farming tools. Address Mrs. Emma V. Root, owner, Martinsburg, N. Y., or Henry Weber, agent, 100 State St., Lowville, N. Y.

No. 608.—Farm of 187 acres; located  $\frac{1}{4}$  mile from Martinsburg P. O.; 2 miles from railway station at East Martinsburg, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{2}$  mile

from butter and cheese factory; 2 miles from milk station. Highways, State road. Nearest village, Lowville, population 2,940, 3 miles distant, reached by highway. General surface of farm, level. Altitude, 1,000 feet. Nature of soil, dark loam. Acres in meadow, 175; in timber, 4, sugar maple; acres tillable, 180. Fruit, 20 apple trees, plums, etc. Best adapted to general farm crops. Fences, good. House, brick, 13 rooms. Outbuildings: barn, new and modern. 150x65, 26 foot posts, stable, 170 feet long, 8 stalls, concrete floor, hop house, milk house, and sugar house. House and barns watered by running water, fields, by springs and creek. Occupied by owner. Reason for selling, ill health. Price, \$15,000. Terms, \$6,000 cash, balance on mortgage at 5%. Price includes 45 thoroughbred cows, 1 registered bull, hay and straw and all best kinds of farm implements. Address George W. Shepard, owner, Martinsburg, N. Y., or Henry F. Weber, 100 State St., Lowville, N. Y.

No. 609.—Farm of 127 acres; located 1 mile from Martinsburg P. O., R. D.; 5 miles from railway station at Lowville on line of N. Y. C. R. R.; 1 mile from school and churches; 1 mile from cheese factory; 5 miles from milk station. Highways, good. General surface, mostly level, some sloping east. Altitude, 1,000 feet. Nature of soil, loam. Four hundred sugar maples; acres tillable, all but sugar bush. Best adapted to general farm crops. Fences, in good condition. House, 9 rooms, good condition. Barn with basement, 30x40. House watered by well, fields, by spring, barns, by spring. Black River, 4 miles distant. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, half cash, balance on mortgage at 5%. Price includes 13 cows, all farming tools, hay and straw. Address Peter Beuce, owner, Martinsburg, N. Y., or Henry F. Weber, agent, 100 State St., Lowville, N. Y.

#### TOWN OF NEW BREMEN

Population 1,809

No. 610.—Tract of land of 67 acres; located 1 mile from Beaver Falls P. O. and railway station, on line of L. & B. R. R.; 1 mile from school, church and milk station. Highways, good. Nearest large village, Lowville, county seat, population 2,940, 8 miles distant, reached by highway. This land is partly wooded and has never been tilled. Surface of farm,

level. Soil, sandy loam. Best adapted to potatoes, grain, fruit, pasture, etc. Price, \$500. Terms to suit purchaser. There is no building on this tract. Is suitable place for bungalow; very fine view. Address Clara S. Itterly, owner, Shawnee, Ohio.

## TOWN OF OSCEOLA

Population 456

No. 611.—Farm of 182 acres; located 1 mile from Osceola P. O.; 12 miles from railway station at Camden, on line of N. Y. C. Ry.; 1 mile from school, churches and cheese factory. Highways, somewhat hilly but good. Surface of farm, rolling. Altitude, about 1,100 feet. Soil, gravelly loam. Acres in meadow, 50; in natural pasture, 80; in timber, 50, mostly second growth hardwood. All tillable except woodland. Fruit, about 70 apple trees. Best adapted to corn, oats, barley and grasses. Fences, board and wire, fair condition. House, 1½ stories, 18x24; wing, 18x30, and shed, 10x38, fair condition. Outbuildings: 1 barn, 40x80, ½ basement; barn, 36x40, with cellar; stone smoke and ash house. Watered by springs and brook. Occupied by owner. Reason for selling, owner has other business. Price, \$2,500. Terms, ½ cash, balance on easy terms. Daily

mail and stage. Address O. G. Cowles, owner, Osceola, N. Y.

## TOWN OF WATSON

Population 757

No. 612.—Farm of 147 acres; 1 mile from Bushes Landing P. O.; 4 miles from Martinsburg railroad station, on line of N. Y. C., Black River branch; R. D. 1, from Glenfield; ½ mile from cheese factory. Highways, good. Soil, clay loam, good quality. Acres in meadow, about 40; acres natural pasture, 50; acres timber, 60, maple, birch, cedar, ash, hemlock and poplar. About 50 different varieties of fruit trees. Best adapted to dairying. Fences, rail and wire, in good condition. Two-story house, 12 rooms, in good condition. Two barns; one, 30x50; one, 26x62, with stone basement, in good condition. Watered by well, spring and creek. Good hunting and fishing. Deer hunting within 7 miles. This farm is 4 miles from Chase Lake and 5½ miles from Lowville. About 5 minutes' walk to school; ½ mile from Black River. The timber will pay for farm. Fine trout stream running through farm. There is a blacksmith shop and milk house on farm. Price, \$3,700, including all farming tools. Terms, ½ cash. Name and address of owner, J. L. Gazin, Glenfield, N. Y., R. D. 1.

## LIVINGSTON COUNTY

Area, 644 square miles. Population, 38,037. Annual precipitation, 36.48 inches. Annual mean temperature 50°. Number of farms, 3,298. County seat, Geneseo.

This county is situated in the western part of the state and is intersected by the Genesee River, and is also drained by the Canaseraga and Honeoye Creeks. The surface features show the eastern part of the county to be quite rough and the southern part generally hilly. The fertile Genesee Valley extends the entire length of the county from the north to south. It is extensively covered with forests. Two large lakes lie in the eastern part of the county. The soil in the southern part is generally sandy loam, while near the center clay is predominant. Numerous salt wells are found in the northern part of the county and have been developed into a great industry. The county leads every other county of the state in the production of rock salt. The total valuation of all farm property is \$28,698,858, an increase of 32 per cent. over the valuation of 1900. The average price of farm land per acre is \$30.40, a gain of about \$5 per acre during the past decade. The domestic animals reported on the farms are: Dairy cows, 17,859; horses, 13,598; swine, 13,231; sheep, 59,794; poultry, 166,149. Milk produced, 9,161,667 gallons, and the receipts from all dairy products, \$787,866. There are fifteen milk stations and factories in the county. Some of the leading crops grown are: corn, 346,213 bushels; oats, 960,346 bushels; wheat, 520,775 bushels; barley, 58,656 bushels; rye, 69,797 bushels; dry beans, 255,244 bushels; potatoes, 1,438,699 bushels; hay and forage, 120,272 tons. The county is intersected by the Delaware, Lackawanna & Western, Erie and Pennsylvania railroads and Genesee Valley Canal. These lines furnish excellent accommodations to the farmers in the marketing of their products. Buffalo, Rochester, Elmira and other centers of population furnish unlimited markets for all farm products. Mineral springs of great value and popularity are located at Avon, a state normal school at Geneseo, and planing mills, salt works, flour and

saw mills are located throughout the county. There are 174 district schools, 12 granges, 1 Pomona grange and a Union Agricultural Society, all devoted to the best interests of the farmers of the county. Vineyards and orchards are being developed with great success.

## TOWN OF AVON

Population 3,432

No. 613.—Farm of 130 acres; located 3 miles from Lima P. O., R. D. and railway station, on line of Lima Elec. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches and 3 miles from condensing plant. Highways, good country road. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 30; in natural pasture, 30; in timber, 3, mostly hardwood; acres tillable, 122. Best adapted to corn, wheat, beans and potatoes. Fences, wire. House, medium size, fair condition. Outbuildings, several barns, fair condition. House watered by well and cistern, barns, by wells, fields, by springs. Occupied by tenant. Reason for selling, ill health. Price, \$85 per acre. Terms, \$5,000 cash, balance easy. Address F. E. Hovey, owner, Avon, N. Y., or J. F. Kellogg, broker, Avon, N. Y.

No. 614.—Farm of 296 acres; located 3 miles from Livonia P. O., R. D.; 10 rods from railway station at Conesus Lake Junction, on line of Erie R. R.; 1 mile from school; 1 mile from church; 2 miles from milk station and condensing plant. Highways, good country road. Nearest city, Rochester, population 218,149, distance 22 miles, reached by rail or highway. General surface, rolling. Nature of soil, sandy and gravelly loam. Acres that can be used as meadow, all. Acres tillable, 286. Fruit, 200 trees of all kinds. Best adapted to wheat, oats, potatoes and beans. Fences, good. Large house, in good condition. Several barns, in poor condition, silo, etc. House watered by wells and cistern, barns, by wells, fields, by springs. Lake Conesus, 1 mile distant. Occupied by tenant. Reason for selling, ill health. Price, \$100 per acre. Terms, \$5,000 cash, balance on mortgage. Address F. E. Hovey, owner, Avon, N. Y., or J. F. Kellogg, broker, Avon, N. Y.

## TOWN OF CALEDONIA

Population 2,248

No. 615.—Farm of 124 acres; located 2 miles from Caledonia P. O., R. D., and railway station, on lines of N. Y. C. and Erie R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Nature of high-

way, good. General surface, level. Nature of soil, limestone. Acres in meadow, 50; in pasture, 3; acres tillable, 120. Fruit, 40 apple trees, variety of small fruit for family use. Best adapted to general crops. Fences, stone wall and wire, in good condition. House, 6 rooms, fair condition. Outbuildings, barn, 56x32, new; cow barn, 16x32; hog pen and poultry house. Occupied by tenant; lease expires April 1, 1915. Reason for selling, has other business. Price, \$50 per acre. Terms, \$2,000 cash payment, balance at 5%. Address Thomas Callon, owner, LeRoy, N. Y., or Chapman's Real Estate Agency, agents, LeRoy, N. Y.

## TOWN OF GROVELAND

Population 2,820

No. 616.—Farm of 183 acres; located  $1\frac{1}{2}$  miles from Groveland P. O. and railway station, on line of D. L. & W. R. R.;  $1\frac{1}{2}$  miles from high school;  $1\frac{1}{2}$  miles from church;  $1\frac{1}{2}$  miles from milk station. Highways, good. Nearest village, Mt. Morris, 7 miles distant, population 2,782, reached by rail or highway. General surface, rolling. Nature of soil, gravel. Acres that can be used as meadow, 50; in natural pasture, 20; in timber, 50, virgin and second growth oak, basswood, walnut and chestnut; acres tillable, 125. Fruit for family use. Best adapted to wheat, beans, corn, general crops. Fences, fair condition. House,  $1\frac{1}{2}$  stories, 11 rooms, fair condition. Outbuildings: main barn 36x78 and small buildings. House watered by well, barns, by well and fields, by springs and brook. Occupied by tenant. Reason for selling, to settle an estate. Price, \$13,000. Terms, \$3,000 cash, balance on mortgage at 6%. This farm is located in noted Genesee Valley. Address C. H. Beane, owner, Attica, N. Y., or Garfield Real Estate Co., brokers, Rochester, N. Y.

## TOWN OF LEICESTER

Population 1,702

No. 617.—Farm of 10 acres; located 4 miles from Mt. Morris P. O. and railway station, on lines of D., L. & W. Erie and Penna. R. R.; 4 miles from school; 4 miles from churches;  $2\frac{1}{2}$  miles

from butter factory;  $2\frac{1}{2}$  miles from cheese factory;  $2\frac{1}{2}$  miles from milk station and condensing plant. Highways, good. General surface, level. Altitude, 1,100 feet. Nature of soil, clay loam. Acres tillable, 10. Fruit, some young apple trees. Best adapted to garden truck. Fences, rail, good condition. House, 8 rooms, fair condition. Barn in need of some repairs. House watered by well, barn, by well. Occupied by owner. Reason for selling, ill health. Price, \$1,400. Terms,  $\frac{1}{2}$  cash. Address Miss Lillian Moore, owner, Moscow, N. Y., or Genesee Valley Real Estate Agency, Mt. Morris, N. Y.

## TOWN OF MOUNT MORRIS

Population 4,004

No. 618.—Farm of 80 acres; located  $5\frac{1}{2}$  miles from Nunda P. O. and railway station, on line of Penna. R. R.; 1 mile from school; 1 mile from church; 1 mile from cheese factory and milk station. Highways, State road. General surface, level. Nature of soil, clay, and some gravelly loam. Acres that can be used as meadow, all; in natural pasture, 10; acres tillable, 74. Fruit, 15 apple trees, best varieties. Best adapted to hay, wheat, etc. Fences, wire and rail, good condition. House, 12 rooms, good condition. Outbuildings: barn, 64x36, gambrel roof; cow barn, 26x18. House watered by well; barns, by well, and fields, by springs. Occupied by owner. Reason for selling, desires a larger farm in same neighborhood. Price, \$6,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Fred Cleveland, owner, Mount Morris, N. Y., or Genesee Valley Real Estate Agency, agents, Mt. Morris, N. Y.

No. 619.—Farm of 144 acres; located  $2\frac{1}{2}$  miles from Mt. Morris P. O. and railway station, on line of D., L. & W., Erie and P. R. Ra.;  $2\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from churches;  $3\frac{1}{2}$  miles from butter factory;  $4\frac{1}{2}$  miles from cheese factory and  $3\frac{1}{2}$  miles from milk station. Highways, good. General surface, level. Nature of soil, clay but not heavy blue clay. Acres that can be used as meadow, 50; in natural pasture, 30; acres tillable, 144. Fruit, enough for family use. Best adapted to corn, beans, wheat, etc. Fences, rail and wire; fairly good. House, 10 rooms, fairly good condition, needs some repairs. Barn, good sized, needs some repairs. House watered by well; barns,

by well, and fields, by springs. Occupied by tenant. Reason for selling, ill health. Price, \$7,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address C. B. Sterner, owner, Mt. Morris, N. Y., or Genesee Valley Real Estate Agency, Mt. Morris, N. Y.

No. 620.—Farm of  $137\frac{1}{2}$  acres; located  $\frac{1}{2}$  mile from Mt. Morris P. O., R. D. No. 2;  $1\frac{1}{2}$  miles from railway station, on lines of D., L. & W., Erie, Penna. and Dansville & Mt. Morris R. Ra.; 1 mile from school; 1 mile from churches; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from milk station and condensing plant. Highways, good. General surface, mostly level. Altitude, 1,000 feet. Nature of soil, light loam (clay). Acres that can be used as meadow, 30; in natural pasture, 15; in timber, 15, all second growth, oak, maple and chestnut; acres tillable, 100. Fruit, for family use. Best adapted to beans, corn, wheat, etc. Fences, rail and wire, fairly good. House, brick, 8 rooms, fair condition. Outbuildings: horse barn, 50x60; cow barn, 18x50; ice house and milk room. Good cistern at barn. House watered by well; barns, by well and cistern; fields, by springs. Occupied by owner. Reason for selling, owner desires a larger farm. Price, \$11,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address F. W. Lewis, owner, Mount Morris, N. Y., or Genesee Valley Real Estate Agency, Mt. Morris, N. Y.

## TOWN OF NUNDA

Population 2,361

No. 621.—Farm of 41 acres; located 1 mile from Nunda P. O. and railway station, on line of Penna. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches;  $\frac{3}{4}$  mile from butter factory;  $\frac{3}{4}$  mile from cheese factory and milk station. Highways, good. General surface, level. Nature of soil, loam; acres tillable, 40. Fruit, 65 apple, some peach, 30 plum, some quinces, also some pear and cherry trees and berries. Best adapted to general crops. Fences, rail, board and wire, good condition. House, 10 rooms, good condition. Outbuildings: basement barn, 60x30; good shed; hog house; 3 poultry houses. House watered by city water; barns, by city water; fields, by springs. Occupied by owner. Reason for selling, desires a larger farm. Price, \$4,000. Terms, to suit purchaser. Address Floyd Creveling,

owner, Nunda, N. Y., or Genesee Valley Real Estate Agency, Mt. Morris, N. Y.

#### TOWN OF WEST SPARTA

Population 772

No. 622.—Farm of 206 acres; located  $5\frac{1}{2}$  miles from Mount Morris P. O.;  $1\frac{1}{2}$  miles from railway station at Groveland Station, on line of D., L. & W. R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from church;  $5\frac{1}{2}$  miles from butter factory;  $5\frac{1}{2}$  miles from cheese factory, and 3 miles from milk station. Highways, State road. General surface, slightly sloping. Nature of soil, clay and some very light loam. Acres in timber, 15, oak, chestnut, elm, etc.; acres tillable, 190. Fruit, all kinds. Best adapted to general crops and dairy farming. Fences, wire. House, 8 rooms, good condition. Fairly good barns and outbuildings, also a good tenant house. House watered by well; barns, by well, and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$9,000. Terms,  $\frac{1}{2}$  cash. Address Samuel Smith, owner, Box 140, Mt.

Morris, N. Y., or Genesee Valley Real Estate Agency, Mt. Morris, N. Y.

No. 623.—Farm of  $206\frac{3}{4}$  acres; located 5 miles from Dansville P. O., R. D. No. 4, and railway station, on line of D. & M. & D., L. & W. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from church and 1 mile from cheese factory. Highways, good. General surface, mostly level. Altitude, 1,300 feet. Nature of soil, sandy and gravelly loam. Acres in meadow, 146; in timber, 60, oak, chestnut, hickory, etc.; acres tillable, 146. Fruit, enough for family use. Best adapted to hay, beans, etc. Fences, wire and rail, good condition. House, 11 rooms, frame, nearly new, modern improvements. House lighted by gas. Outbuildings: barns, gambrel roof, nearly new, with basement, sheds attached, all in first class condition. Occupied by owner. Reason for selling, ill health. Price, \$13,400. Terms, \$6,500 cash, balance on mortgage. Address Mrs. Grace Miller, owner, Dansville, N. Y., or Genesee Valley Real Estate Agency, Mount Morris, N. Y.

#### MADISON COUNTY

Area, 628 square miles. Population, 39,289. Annual precipitation, 48.5 inches. Annual mean temperature,  $45.6^{\circ}$ . Number of farms, 4,042. County seat, Wampsville.

This county is located in the central part of the state, touched on the north by Oneida Lake, and Oneida Creek forms its northeast boundary. It is drained by Chenango and Unadilla Rivers and Chittenango, Canastota and Oriskany Creeks. This county is one of the leading counties for grazing and stock raising. It is fertile and productive and easily accessible to the best markets. The farms offer excellent opportunities and give good returns for intelligent effort. In the southern part the surface is mostly hilly, traversed by broad valleys, while in the northern part gentle undulations and stretches of level land prevail. The county is well wooded and has an abundance of pure water. The rocks which underlie are sandstone and shale. The county has quarries of gypsum, water lime, iron ore and excellent building stone. In the western part gravelly loam is prevalent, while in the southern section volusia silt loam predominates. The soil in the northern portion is usually rich, black and gravelly loam whereon are produced enormous crops of celery, onions, etc. The leading crops are corn, 212,790 bushels; oats, 712,637 bushels; barley, 66,006 bushels; buckwheat, 111,431 bushels; potatoes, 619,283 bushels; hops, 1,384,508 pounds; hay and forage, 238,578 tons. Alfalfa grows abundantly in the county. The average price of farm land per acre is \$41.45. Domestic animals are reported as follows: Dairy cows, 36,994; horses, 11,282; swine, 7,750; sheep, 7,602; poultry, 211,716. There were produced 22,381,370 gallons of milk, and the total receipts from the sale of dairy products were \$2,247,721. Live stock represents 21 per cent. of the entire value of farm property in the county, making it rank third in this industry. The county is intersected by the New-York Central and Hudson River; New York, Ontario and Western; West Shore; Delaware, Lackawanna and Western and the Cortland and Northern railroads; the Erie canal also passes through the northern portion. There are 199 school districts with high schools and academies in some of the larger villages. Colgate University is located at Hamilton and is one of the well known universities of the east. At Morrisville is located one of the new agricultural schools which are contributing so much to the agricultural

power and prosperity of the state. Flour mills, breweries, knitting mills, carriage factories and canning factories are located in this county. There are seventeen agricultural organizations, thirty-five miles of state and county roads, 1,273 miles of improved highways. The principal exports of the county are hops, dairy products and pure-bred cattle. The soil and climate is especially adapted for the production of apples of the highest quality and other fruits can be grown with excellent results.

## TOWN OF BROOKFIELD

Population 2,403

No. 624.— Farm of 335 acres; located  $\frac{1}{2}$  mile from Bridgewater P. O. and railway station, on line of D., L. & W. and U. V. R. Rs.;  $\frac{1}{2}$  mile from school; 1 mile from churches. Highways, level and good. Nearest village, Bridgewater, population about 300. Surface, level, except pasture. Soil, mostly river bottom. Acres in meadow, 100; natural pasture, 80; timber, 15, all kinds; acres tillable, 200. Fruit, apples and pears. Best adapted to hay, grain, etc. Fences, board and wire, good. Three good houses, larger than the others. Outbuildings: barn, 135x40, for fancy horses; horse barn with enclosed sheds for work horses; cow barn and two silos, 110x40; other outbuildings. Watered by springs, streams and Unadilla River, which runs through farm. Occupied by tenant. Reason for selling, to close an estate. Race course on farm, which is within easy distance of Utica by State road or railroad. Price, \$22,000. Terms, reasonable. Address Clinton Noble, owner, West Winfield, N. Y.

No. 625.— Farm of 112 acres; located 1 mile from North Brookfield P. O. and railway station, on D., L. & W. R. R.; R. D. Soil, very productive and in a high state of cultivation. Acres tillable, 10; acres timber, 20; 500 sugar maple trees; 30 bearing apple trees. House, 10 rooms, 2 stories, in good repair. Modern barns with basement and concrete floors. Watered by running springs and brook; concrete reservoir which holds 100 barrels is piped to house and barn. Well fenced. There are 3 acres of alfalfa, 1 year old and 1 acre, 2 years old from which owner had 3 crops this season. Schools, churches, stores, milk station at North Brookfield, 1 mile distant. Price, \$5,000. Terms, easy. Address W. T. Squires, owner, North Brookfield, N. Y.

No. 626.— Farm of 125 acres; situated  $\frac{1}{4}$  mile from North Brookfield, on D., L. & W. R. R.; R. D. from North Brookfield, 90 acres tillable; 30 acres timber. Soil, very productive. Adapted to hops, stock raising, hay and grain. Good fences. Spring and brook water. Barn,

31x50, in good condition. No house. Large pond of pure spring water on farm from which \$400 to \$500 worth of ice is sold each year. Taxes in Town of Brookfield very low. Price, \$5,000. Terms, easy. Address W. T. Squires, owner, North Brookfield, N. Y.

No. 627.— Farm of 118 acres; located  $2\frac{1}{2}$  miles from North Brookfield P. O. and railway station, on line of D., L. & W. R. R., 1 mile from school and Protestant churches,  $2\frac{1}{4}$  miles from milk station and condensing plant. Highways, somewhat hilly but in good condition. Surface of farm, rolling. Altitude, about 1,400 feet. Soil, clay and loam. Acres in meadow, 58; in natural pasture, 25; in timber, 35, hemlock, birch, beech and basswood. Acres tillable, 70. Fruit, cherries, apples and pears. Best adapted to corn, oats and potatoes. Fences, wire and board, fair condition. House, 12 rooms, good condition. Outbuildings: horse barn, wood and wagon houses, good condition; cow barn, poor condition. Watered by well, brooks and spring. Occupied by tenant. Price, \$3,500. Terms, two-thirds cash. Address Mrs. A. E. Beney or Miss V. M. Larkin, owners, Earlville, N. Y.

No. 628.— Farm of 130 acres; located  $3\frac{1}{2}$  miles from North Brookfield P. O.,  $3\frac{1}{4}$  miles from railway station at Hubbardsville, on line of D., L. & W. R. R.;  $1\frac{1}{2}$  miles from school, churches and cheese factory, 3 miles from milk station. Highways, good. Surface of farm, rolling. Altitude, 1,500 feet. Soil, clay and loam. Acres in meadow, 50; in natural pasture, 60; in timber, 20, mostly maple. Acres tillable, 90. A few fruit trees. Best adapted to corn, oats and potatoes. Fences, in fair condition. House, 5 rooms, fair condition. Outbuildings: large barn, horse barn with lean-to, fair condition. Watered by springs. Occupied by tenant. Reason for selling, owner living in town, cannot attend to farm. Price, \$2,500. Terms, cash preferred, would take two-thirds down. Address Mrs. A. E. Beney or Miss V. M. Larkin, owners, Earlville, N. Y.

## TOWN OF CAZENOVIA

Population 3,687

No. 629.—Farm of 200 acres; located  $\frac{1}{4}$  mile from New Woodstock P. O., R. D. No. 1 and railway station, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{4}$  mile from churches;  $\frac{1}{4}$  mile from butter factory;  $\frac{1}{4}$  mile from cheese factory and  $\frac{1}{2}$  mile from milk station. Highways, good. Nearest city, Syracuse, population 137,249, 22 miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,200 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 95; in natural pasture, 90; in timber, 15, maple, beech, basswood and elm. Fruit, apples, cherries, plums, currants, raspberries, strawberries, for home use. Best adapted to wheat, corn, grain of all kinds and 25 acres of alfalfa. Fences, first class condition, 2 miles of Page woven wire. House, 15 rooms, steam heat, in good condition. Outbuildings: barn No. 1, 30x114; barn No. 2, 36x60, connected by enclosed shed 16x120, tool shed, poultry house, etc. House watered by running water, barns, by spring and fields, by spring. Cazenovia Lake, 5 miles distant. Occupied by owner for 79 years. Reason for selling, ill health and old age. Price, \$100 per acre. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address J. W. Coley, owner, New Woodstock, N. Y.

No. 630.—Farm of 47 acres; located 3 miles from New Woodstock P. O., R. D. No. 2;  $1\frac{1}{4}$  miles from railway station at Delhi, on line of Lehigh Valley R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches; 3 miles from butter factory; 3 miles from cheese factory; 3 miles from milk station and 5 miles from condensing plant. General surface, rolling and level. Nature of soil, clay loam. Acres that can be used as meadow, 20; in natural pasture, 17; acres tillable, 40. Fruit, apples. Best adapted to hay. Fences, in fair condition. Eight-room house, in fair condition. Barn, 30x40, fair condition. House watered by well and cistern, fields by brook. Occupied by tenant. Reason for selling, to settle an estate. Price, \$1,800. Terms, cash. Address Mary Judd, heir of estate, New Woodstock, N. Y.

No. 631.—Farm of 86 acres; located  $2\frac{1}{4}$  miles from New Woodstock P. O. and railway station, on line of Lehigh Valley R. R.;  $2\frac{1}{4}$  miles from school,

churches, cheese factory and milk station. Highways, part hilly and part level. Nearest city, Syracuse, population 137,249, distant  $24\frac{1}{4}$  miles, reached by rail or highway. General surface, level and rolling. Nature of soil, gravel and clay subsoil. Acres that can be used as meadow, 35; in natural pasture, 20; in timber, 31, hemlock, maple and beech; acres tillable, 35. Fruit, apples, pears and grape vines. Best adapted to corn, oats, barley, buckwheat, cabbage, potatoes and hay. Fences, wire in good condition. Seven-room house, cellar dug for a new house. Barn in fair condition. Fields watered by springs. Price, \$2,500. Terms, \$1,000 cash, balance on mortgage. Address Mrs. Gertrude P. Mead, owner, New Woodstock, N. Y.

No. 632.—Farm of 63 acres, located 1 mile from New Woodstock, P. O., R. D. No. 26, and railway station; on line of Lehigh Valley R. R.; 1 mile from school; 1 mile from churches; 1 mile from cheese factory and milk station. Highways, State road. Nearest city, Syracuse, population 137,249, 22 miles distant reached by rail or highway. General surface, part level and part rolling. Nature of soil, gravel with clay subsoil. Acres that can be used as meadow, 40; in natural pasture, 20; in timber 4, cedar and maple. Acres tillable, 57. Fruit, apples, 48 pear, 15 plum, 15 cherry trees, currants, gooseberries and 200 Columbia raspberries. Best adapted to corn, oats, barley, cabbage and potatoes. Fences, wire, good condition. Twelve-room house in good condition, bath and steam heat, two cellars. Outbuildings, main barn 68x32 with cemented cow barn for 20 head, horse barn 24x48, granary, poultry house and pig pen. House watered by wells and cistern, barns, by running water and fields, by brooks. Occupied by owner. Reason for selling, old age. Price, \$8,000. Terms, one-half cash, balance on mortgage. Address A. P. Mead, owner, New Woodstock, N. Y.

No. 633.—Farm of 180 acres; located  $1\frac{1}{2}$  miles from New Woodstock P. O., R. D. 1, and railway station, on line of E. C. & N., a branch of Lehigh Valley R. R.;  $1\frac{1}{2}$  miles from High School, Protestant churches, cheese factory and milk station; 3 miles from milk condensing plant. Highways, part hilly and part level. Nearest large village, Cazenovia, population 1,861, 6 miles distant, reached by rail and highway. Surface of farm,

rolling. Altitude, 1,300 feet. Soil, loam, some stone. Acres in meadow, 100; in natural pasture, 60; in timber, 20, largely second growth hemlock. Acres tillable, 125. Fruit, apples. Best adapted to oats, barley, corn, potatoes, cabbage and hay. Fences, mostly wire, nearly all in good condition. House, 31x34, with wing, 14x18, 2 stories, large enough for 2 families, good condition. New 7 room tenant house being built. Outbuildings: basement cow barn, 120x30; horse barn, wagon shed, silo, granary, grain or hay barn, hen house, 16x60, built two years. Watered, house, by cistern; barns, by running water and well; fields, by springs and creek. Reason for selling, owner wants to give up farming. Price, \$65 per acre. Terms, one-half cash. Address E. L. Buell, Owner, New Woodstock, N. Y.

TOWN OF EATON  
Population 2,417

No. 634.—Farm of 70 acres; located 2½ miles from Morrisville P. O., R. D. No. 2; 5 miles from railway station at Morrisville, on line of N. Y., O. & W. R. R.; ½ mile from school; 2½ miles from churches; 2½ miles from butter factory; 2½ miles from cheese factory and 5 miles from milk station. Highways, State road. Nearest city, Oneida, population, 8,317, 18 miles distant, reached by rail and highway. General surface, rolling. Acres that can be used as meadow, 50; in natural pasture, 20; in timber, 7, maple, beech, white ash; acres tillable, 55. Fruit, 40 apple, 1 pear and 50 plum trees. Fences, barbed wire, in good condition. Eleven room house, good condition. Outbuildings, cow barn, 40x32; horse barn, 30x30; poultry house, 28x14; storage barn, 30x20, poor condition. House watered by well, barns, by creek, and fields, by spring. Occupied by tenant. Reason for selling, other business. Price, \$3,000. Terms, \$1,000 cash, balance on mortgage. Address John H. Evans, Owner, Cazenovia, N. Y.

No. 635.—Farm of 200 acres; 2½ miles from Eaton P. O.; 3 miles from Eaton station, on line of N. Y., O. & W. R. R.; R. D. Highways, in fair condition. Adapted to corn, potatoes, dairying and grain. Acres in meadow, 75; tillable, 150; 25 acres in timber, 250 sugar maples; 3 acres of bearing apples. Watered by well, springs and brooks; 1½-story house. Large barn,

silo and other outbuildings. This farm borders on Bradley Brook reservoir and is ½ mile from Hatches Lake, which is a summer resort. Price, \$8,500. Terms, reasonable. Owner will rent on shares; will also hire young man with small family by the year. Address Lewis Hopkins, Owner, Lebanon, N. Y., R. D. Owner will rent on shares.

No. 636.—Farm of 160 acres; 2 miles from Eaton P. O., R. D. J., and railway station, on line of N. Y., O. & W. R. R.; 1 mile from school; 2 miles from Baptist and Presbyterian churches; 2 miles from butter and cheese factory; 2 miles from milk station; 7 miles from condensing plant. Highways, hilly, good. Nearest cities, Syracuse, 30 miles distant, population 137,249; Oneida, 12 miles distant, population 8,317, reached by rail or highway. Surface of farm, part hilly, part rolling and some level. Altitude, 1,500 feet. Soil, gravelly loam. Acres in meadow, 40; in natural pasture, 60; in timber, 20, mostly sugar maple; acres tillable, 40. Fruit, 100 apple trees, pears, cherries, plums, etc. Best adapted to oats, corn and wheat. Fences, wire, fair condition. House, 14 rooms, in good condition. Outbuildings, large barn, with basement for 40 cows; horse barn and stable; corn house, with basement for hogs. Watered, house, by well; barns, by springs piped to barn; fields, by springs and river. A branch of the Chenango river flows through this farm. Occupied by tenant. This farm is 2 miles from the State School of Agriculture at Morrisville, N. Y. Reason for selling, to settle an estate. Price, \$10,000. Terms, part cash, balance on time. Address J. E. Slaughter, executor, Warsaw, N. Y. Owner will rent with option to buy.

No. 637.—Farm of 30 acres; located on Main street of West Eaton; 3 miles from railway station at Eaton, on line of N. Y., O. & W. R. R. Altitude, 1,400 feet. West Eaton has a good school, 2 churches, 2 general stores, post-office, hotel, woolen manufacturing plant. Is near 3 lakes which are well stocked with great variety of fish; 3 miles from New York State School of Agriculture, 30 miles from Syracuse, 18 miles from Oneida, 30 miles from Utica; 5 acres truck and fruit land, 1 acre currants. House, 8 rooms, bath, furnace. Price, \$1,500. Terms, \$1,000 cash, balance on mortgage. Address D. E. Darrow, Owner, West Eaton, N. Y.

## TOWN OF FENNER

Population 807

No. 638.—Farm of 80 acres; located 3 miles from Cazenovia P. O., R. D. 1;  $\frac{3}{4}$  mile from railway station at Chittenango Falls, on line of L. V. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{3}{4}$  mile from Methodist Episcopal church;  $\frac{1}{4}$  mile from milk station. Highways, good, mostly macadamized. Nearest village, Cazenovia, population 1,861, 3 miles distant, reached by rail or highway. Surface of farm, mostly rolling. Altitude, 1,000 feet. Soil, gravel. Acres in meadow, 25; in natural pasture, 30; in timber, 6, mostly beech and maple; acres tillable, 70. Fruit, 50 apple, 25 plum, 6 cherry and 2 pear trees; also  $\frac{1}{2}$  acre of small fruits. Best adapted to fruit and dairying. Fences, mostly wire. House, 12 rooms, painted, with blinds. Barns, 1, 30x40, with basement; 1, 18x30; horse barn, 20x40, fitted with hay carrier and track. Watered, house and barns, by spring; fields, by 2 springs. Chittenango Creek borders the west side of farm; 2 beds of black gravel, suitable for concrete work. Occupied by owner. Reason for selling, advanced age of owner. Price, \$3,500. Terms, one-half cash, balance on time. Address H. O. Turner, Owner, Cazenovia, N. Y., R. D. 4.

No. 639.—Farm of 500 acres; located  $2\frac{1}{2}$  miles from Cazenovia P. O., R. D. No. 1; 1 mile from railway station at Bingley, on line of Lehigh Valley R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches; 3 miles from cheese factory; 1 mile from milk station. Population of Cazenovia 1,861, reached by rail or highway. General surface, slightly rolling. Altitude, 1,350 feet. Nature of soil, clay loam. Acres in meadow, 300; in pasture, 100; in timber, 75, second growth; acres tillable, 400. Fruit for home use. Best adapted to wheat, barley, oats, peas, hay and corn. Fences, mostly wire, woven and barbed, good condition. Houses, 3 in all, good repair, 1 nearly new. Outbuildings, 3 sets, all in good repair. Houses watered by well and springs; barns, by springs; fields, by trout brook. Occupied by owner. Reason for selling, age and other interests. Owner would sell part of farm. Price, \$22,000. Terms, \$10,000 cash. Address J. L. O'Hara, Owner, Cazenovia, N. Y.

No. 640.—Farm of 125 acres; located 2 miles from Cazenovia P. O., R. D. No.

1, and railway station, on line of L. V. & W. S. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches;  $2\frac{1}{2}$  miles from cheese factory and 1 mile from milk station. Highways, good. Nearest city, Syracuse, population 137,249, 21 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,300 feet. Nature of soil, clay and gravel loam. Acres in meadow, 100; in natural pasture, 25; in timber, some second growth, mostly maple; acres tillable, 100. Fruit, some apple trees. Best adapted to all grain crops and alfalfa. Fences, mostly wire. House, 7 rooms, good condition. Outbuildings, barns, 34x70, 30x40, 30x40, all in good condition, 2 newly painted and all new roofs. House watered by well; barns, by spring; fields, by brook. Occupied by owner. Reason for selling, other business. Price, \$6,250. Terms, \$2,000 cash, balance on mortgage at 5%. Address John L. O'Hara, Owner, Cazenovia, N. Y.

No. 641.—Farm of 48 acres; located 4 miles from Cazenovia P. O., R. D. 1; 4 miles from railway station at Chittenango Falls on line of Lehigh Valley R. R.; 1 mile from school and churches;  $1\frac{1}{2}$  miles from butter factory; 1 mile from milk station. Highway, good. Altitude, 1,300 feet. Acres in meadow, 20; in pasture, 28; in timber, 8, hardwood. acres tillable, 30. Fruit, 28 apple trees, some plums, cherries and red raspberries. Best adapted to general farm crops. Fences, wire, fair condition. House, 7 rooms, fair condition. Outbuildings, barn 36x40; shed attached. House watered by wells; barns, by spring; fields, by creek. Reason for selling, owner in other business. Price, \$1,000. Terms,  $\frac{1}{3}$  cash. Near canning factory. Address J. S. Brogmeier, Owner, Cazenovia, N. Y. Will rent with option to buy.

## TOWN OF GEORGETOWN

Population 925

No. 642.—Farm of 205 acres; located 3 miles from Lebanon P. O. and railway station on line of Chenango Valley R. R.; 1 mile from school and churches; 3 miles from butter factory and milk station. Nearest large village, Hamilton, population 1,689, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, 800 feet. Soil, clay loam. Acres in meadow, 100; in natural pasture, 50; in timber, 55, hemlock, beech and maple; acres tillable, 100.

Best adapted to oats, peas, corn and buckwheat. Fences, wire, fair condition. House, 45x30, good condition. Outbuildings, horse barn, 30x30; grain barn, 30x60. Watered by well and springs. Price, \$4,000. Terms, one-half down, balance on mortgage. Address Fred B. Parker, owner, Batavia, N. Y. Owner will rent.

## TOWN OF HAMILTON

Population 3,825

No. 643.—Farm of 135 acres; 1½ miles from P. O., R. D., and railway station, on line of D., L. & W. R. R.; 1 mile from school and churches; 1½ miles from cheese factory and milk station; 5 miles from condensing plant. Highways, good. Nearest village, East Hamilton, 1 mile distant, reached by rail or highway. Surface of farm, some hilly, rolling and level. Good soil. Acres in meadow, 50; in natural pasture, 30, in timber, 30, hemlock, maple, beech, etc.; acres tillable, 60. Fruit, 50 apple trees, 20 plums, 6 pears. Adapted to all kinds of crops. Fences, mostly wire, cedar posts, good condition. House, in good condition. Outbuildings, basement barn, hop house, hog pen, horse barn, hen house and silo, all in good condition. Watered, house, by well and cistern; barns, by well and spring; fields, by brook and spring. Occupied by owner. Reason for selling, advanced age of owner. Price, \$5,000. Terms, part cash, balance on mortgage. Address C. D. Alderman, owner, Poolville, N. Y.

No. 644.—Farm of 91 acres; located 1½ miles from Poolville P. O., R. D. 1; 3 miles from Hubbardsville railway station, on line of D., L. & W. R. R.; ¼ mile from school; 1½ miles from churches; 3 miles from milk station. Nearest village, Hamilton, 7 miles distant, population 1,689, reached by good highway. General surface, rolling. Altitude, 1,450 feet. Nature of soil, clay loam. Acres in meadow, 55; in pasture, 20; in timber, 16, maple, beech and hemlock; acres tillable, 55. Fruit, 40 apple trees, pears, plums. Best adapted to corn, oats, potatoes and hay. Fences, wire, good condition. House, 14 rooms, good condition. Outbuildings, barn, 34x62; barn, 22x26, with basement and concrete floors, painted, good condition. House watered by artesian well; barns, by running water; fields, by spring and brook. Price, \$4,000. Terms, cash preferred. Address H. S. Dresser, owner, Poolville, N. Y.

No. 645.—Farm of 120 acres; located ½ mile from Poolville P. O. and 40 rods from railway station, on line of D., L. & W. R. R.; ¼ mile from school; ½ mile from churches; 40 rods from milk station; 3 miles from condensing plant. Nearest village, Norwich, population 7,422, 20 miles distant, reached by rail or highway. General surface, part rolling, part level. Nature of soil, gravelly loam. Acres in pasture, 50; in timber, 30, beech, maple, elm and hemlock; acres tillable, 70. Fruit, apples. Best adapted to hay, oats, corn, potatoes and general farm crops. Fences, wire, mostly new. House, large, good condition. Outbuildings, 2 barns, 33x52, 22x40, and good sized horse barn, all in good condition. House watered by running water; barns, by tank; fields, by springs and brook. Occupied by tenant. Reason for selling, advanced age. Price, \$6,000. Terms, cash preferred, will consider terms. Price includes stock and some farm tools. Address M. L. Gillette, owner, Jefferson, Ashtabula Co., Ohio.

## TOWN OF LEBANON

Population 1,079

No. 646.—Farm of 200 acres; situated 1½ miles from Lebanon P. O. and railway station, on line of W. S. R. R., Syracuse to Earlville branch; R. D. 2 from Lebanon. Highways, good. Acres in meadow, 70; acres in timber, between 40 and 50, mostly sugar maple, some beech and basswood. Fruit, pears, cherries, plums and apples. Best adapted to oats, corn, barley, buckwheat, peas, potatoes, timothy, clover and alfalfa. Fences, board, woven wire and barbed wire. House, 30x40, with wing, 2 stories, in good condition. Barn, 40x111, with 25-foot posts, wing, 30x40; an ice house; milk room; a little house for hired man; a new silo; all in good condition. Watered, house, by well, pump inside; barns, spring water, inside; fields, by springs and streams. Occupied. Reason for selling, advanced age of owner. Price includes some tools, wagons, machinery, etc. Price, \$12,000, includes 10 grade Holstein cows. Terms, ½, ½ or ¾ down, balance on mortgage at 5%. Address John Fisk, owner, Lebanon, N. Y.

No. 647.—Farm of 296 acres; located 1½ miles from Lebanon P. O., R. D. 2, and railway station, on line of W. S. R. R., Chenango branch; ½ mile from school; 1½ miles from churches and

milk station; 3 miles from milk condensing plant. Highways, somewhat hilly, but good. Nearest city, Utica, population 74,419, 35 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,200 feet. Soil, Miami stony loam. Acres in meadow, 50; in natural pasture, 100; in timber, 50, beech, maple and hemlock, first and second growth; acres tillable, 100. Fruit, 50 trees. Best adapted to grass, corn, cabbage, fruits and dairying. Fences, woven and barbed wire, good condition. House, 12 rooms, woodshed attached, good condition, convenient for 2 families. Outbuildings, basement barn, silo, hen house, hog house and milk house, all in good condition. Watered by well, springs and brook. Occupied by owner. Price, \$6,000. Terms, \$3,000 cash, balance on mortgage. Address Mary M. Collier, owner, Earlville, N. Y., R. D. 2.

## TOWN OF LENOX

Population 4,851

No. 648.—Farm of 203 acres; 2 miles from P. O., R. D., and railway station at Canastota, on line of N. Y. C., Lehigh Valley and West Shore R. Rs., and an electric line; 2 miles from high school and churches; 2 miles from butter factory, milk station and condensing plant. Highways, good. Nearest city, Syracuse, 20 miles distant, population 137,249; Canastota, population 3,247, reached by rail and highway. Surface of farm, slightly rolling. Altitude, 425 feet. Soil, clay and sandy loam, also muck. Acres in meadow, 50; in natural pasture, 40; 6 acres alfalfa, 3 acres timber of various kinds; acres tillable, 175. Fruit, small orchard. Best adapted to potatoes, corn, oats, wheat, hay, onions and celery. Fences, woven, barbed wire and rail. House, 10 rooms, woodshed attached, in good condition. Outbuildings, basement barn, concrete floor. 32 stanchions and box stall; barn, 30x40, with large shed attached; barn, 30x40, with shed. 22x24; horse barn, wagon house, hog pen, 2 chicken houses, 2 silos, all in good condition. Occupied by owner. Reason for selling, advanced age of owner. Price, \$12,000. Terms, on application. Owner will sell stock and tools, if desired. Address A. G. Maxwell, owner, Canastota, N. Y., or Charles S. Hutchinson, agent, 107 West Kennedy St., Syracuse, N. Y.

## TOWN OF MADISON

Population 1,926

No. 649.—Farm of 54 acres; located 2½ miles from Hamilton P. O. and railway station on line of N. Y., O. & W. R. R.; 20 rods from school; 2½ miles from churches; 2½ miles from Colgate University; 2½ miles from cheese factory and milk station. Highways, good. General surface, rolling. Altitude, 1,200 feet. Nature of soil, sandy and gravelly loam. Acres that can be used as meadow, 50; acres tillable, 50. Fruit, 25 apple and 4 cherry trees. Best adapted to all crops. Fences, fair condition. House, 7 rooms. Outbuildings: 48 foot basement barn, poultry house and hog house. House watered by well, fields, by stream. Occupied by owner. Reason for selling, ill health and other business. Price, \$2,800. Terms, \$1,500 cash, balance on mortgage. Address E. H. Rutherford, owner, Hamilton, N. Y., or R. A. Borland, broker, 3 Cook Block, Norwich, N. Y.

No. 650.—Farm of 53 acres; located ¾ mile from Oriskany Falls P. O. and railway station on line of N. Y., O. & W. R. R.; ¾ mile from school; ¾ mile from churches; ¾ mile from milk station and 4 miles from condensing plant. Highways, State road. General surface, level and slightly rolling. Nature of soil, good. Acres in timber, 4, maple: Acres tillable, 40. Fruit, 25 apple 15 pear and 15 cherry trees, 1½ acres of Columbia raspberries and ¼ acre of strawberries. Best adapted to fruit. Fences, wire, in good condition. House, 12 rooms, with furnace. Outbuildings: dairy barn for 12 head of cows, horse barn, milk house, ice house, corn crib, hop kiln, silo. House watered by well, barns, by well, fields, by marsh. Occupied by owner. Reason for selling, desires a larger farm. Price, \$4,500. Terms, \$1,600 cash, balance on mortgage. Near good village where there is a large knitting mill. Address James B. Williams, owner, Oriskany Falls, N. Y., or W. E. Head Farm Agency, 114 Arcade Building, Utica, N. Y.

## TOWN OF NELSON

Population 1,139

No. 651.—Farm of 192½ acres; located 1 mile from Erieville P. O.; 1 mile from railway station at Erieville, on line of N. Y. C. R. R.; 1 mile from school, Methodist Episcopal and



FIG. 301.—HOUSE ON FARM NO. 648, TOWN OF LENOX,  
MADISON COUNTY.



FIG. 302.—BUILDINGS ON FARM NO. 648, TOWN OF  
LENOX, MADISON COUNTY.





Baptist churches, butter factory, cheese factory and milk station. Highways, good. Nearest village, Erieville, population 500, 1 mile distant, reached by highway. Surface of farm, rolling. Altitude, 1,700 feet. Soil, loam. Acres in meadow, 70; in natural pasture, 70; balance in timber, beech, birch, maple, hemlock, basswood; acres tillable, 140. Fruit, apples and pears. Best adapted to corn, potatoes and hay. Fences, good. House, 2 stories, in good condition. Cow barn, basement, 32x80. Watered, house by well; fields, by living springs. Occupied by tenant. Reason for selling, ill health. Price, \$26 per acre. Address N. E. Richards, owner, Nelson, N. Y. Owner will rent.

No. 652.—Farm of 48½ acres; located ¼ mile from Nelson P. O., R. D. No. 3; 4 miles from railway station at Cazenovia and Erieville, on lines of N. Y. C. & L. V. R. R.; ¼ mile from school; 4 miles from churches; ¼ mile from butter factory; 4 miles from cheese factories. Highways, good. General surface, rolling and level. Altitude, 1,600 feet. Nature of soil, Miami loam. Acres that can be used as meadow, 40; in natural pasture, 2; in timber, 6½. cedar, hemlock, pine, maple, white ash, etc. Acres tillable, 40. Fruit, 12 apple, 3 cherry, 2 pear, 4 plum trees and small fruit. Best adapted to corn, alfalfa, hay, oats and potatoes. Fences, rail and wire. House, good sized, in excellent condition. Basement barn and poultry house. House watered by well and cistern; barns, by springs, and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,600. Terms, one-half cash, balance on mortgage. Sulphur spring on farm. Address Wm. H. Putman, Owner, Box 65, Nelson, N. Y.

No. 653.—Farm of 163 acres; located ¾ mile from Cazenovia P. O., R. D. No. 3; 3 miles from 2 railway stations, on lines of N. Y. C. & L. V. R. R.; ½ mile from school; ¾ mile from churches and butter factory. Highways, State road. General surface, rolling, eastern exposure. Altitude, 1,500 feet. Nature of soil Miami and stony loam. Acres that can be used as meadow, 75; in natural pasture, 88; in timber, 15, cedar, maple and elm. Acres tillable, 120. Fruit, 50 apple, 10 plum and 3 pear trees and small fruit for family use. Best adapted to grain, corn, alfalfa and dairying. Fences, rail and wire, good condition. House, newly painted, 2 verandas. in

good condition. Outbuildings, basement barn with concrete floor, patent stanchions, new milk house, granary, garage, new poultry house and large silo, good condition. House watered by spring, barns, by spring and fields, by spring and creek. Occupied by owner. Reason for selling, death in family. Price, \$9,000. Terms: ½ cash, balance on mortgage. Address, Delos D. Blowers, owner, R. F. D. No. 3, Cazenovia, N. Y.

No. 654.—Farm of 109 acres; located 1 mile from Nelson P. O., R. D. No. 3; 4 miles from railway station at Cazenovia, on lines of N. Y. C. & L. V. R. R.; 1 mile from school; ¼ mile from churches; 1 mile from butter factory; 4 miles from cheese factory. Highways, good. General surface level, some hilly. Altitude, 1,500 feet. Nature of soil Miami loam and muck. Acres that can be used as meadow, 75; in natural pasture, 34; in timber, 15, cedar, beech, maple and elm. Acres tillable, 80. Fruit, 50 apple, 12 plum and 3 pear trees. Best adapted to corn, grain, alfalfa, potatoes and hay. Fences, American wire, rail and barbed wire, good condition. House, 18 rooms, good condition with 2 verandas. Outbuildings: concrete basement barn, 30x74; hog pen, 30x20; horse barn, 30x28; granary and large new silo. House watered by spring, barns and fields, by spring and large creek. Occupied by owner. Reason for selling, ill health. Price, \$4,500. Terms, ½ cash, balance on mortgage. Address Edward Putman, owner, Nelson, N. Y.

No. 655.—Farm of 110 acres; located 4 miles from Erieville P. O., R. D. 1; 4 miles from railway station at Erieville on line of Chenango branch of N. Y. C. & H. R. R. R.; ¾ mile from school, Methodist and Congregational churches; ½ mile from butter factory and cheese factory; 4 miles from milk station. Highways, hilly, but good. Nearest village, Cazenovia, population 1,861, 7 miles distant, reached by highway. Surface of farm, rolling. Soil, loam. Acres in meadow, 30; in natural pasture, 40; in timber, 40; maple, beech and hemlock; acres tillable, 69. Fruit, 30 apple, 3 pear, 4 plum trees and 1 cherry tree. Best adapted to hay, grain and dairying. Fences, wire, in good condition. House, 12 rooms, 2 stories, in good condition. Barn, 50x32, in good condition. Watered, house and barn, by well; fields, by springs and stream. Oc-

cupied by owner. Reason for selling, poor health of owner. Price, \$32 per acre. Terms, \$1,500 cash, balance on easy terms. Address N. E. Richards, owner, Nelson, N. Y. Owner will rent.

No. 656.—Farm of 86 acres; located 3 miles from Erieville P. O., R. D. 2, and railway station on line of N. Y. C. R. R.; 3 miles from churches; 5 miles from Cazenovia, a summer resort, population 1,861. Highways, good. Surface partly level and partly hilly. Soil, loam. Acres tillable, 80. Fruit, apples, plums and pears. Best adapted to grass, grain, corn, potatoes and cabbage. House, 1½ stories, 8 rooms. Watered by well and cistern. Outbuildings, barn, 36x56, with basement stable for 20 head of cattle, 13 swing stanchions, silo and hen house. Barn watered by spring brook. Reason for selling, ill health of owner. Price, \$2,000. Terms, \$650 down, balance on mortgage. Address A. R. Warren, owner, Cazenovia, N. Y. Owner will rent.

#### TOWN OF SMITHFIELD

Population 880

No. 657.—Farm of 108 acres; located 7 miles from Canastota P. O., R. D. 5, and railway station on line of N. Y. C. R. R.; ¾ mile from school; 3 miles from churches, butter factory and milk station; 1 mile from cheese factory; 7 miles from milk condensing plant. Highways good. Nearest city, Oneida, 8½ miles distant, population 8,313, reached by highway. Surface of farm, gently sloping to the south. Altitude, about 1,400 feet. Soil, Miami loam (lime). Acres in meadow, 25; in natural pasture, 10; in timber, 20, basswood, maple, etc. Acres tillable, 88. Fruit, 75 apple, 15 plum and 10 cherry trees. Best adapted to alfalfa, clover, wheat, corn, oats, cabbage, etc. Fences, woven and barbed wire. House, large, 1½ stories. Outbuildings hay barn, 28x62, with basement; horse barn, 24x32; pig and hen house; 24 swing stanchions in cow stable, new, concrete. Watered by well and spring. Oneida lake is 8 miles from farm. Occupied by tenant. Reason for selling, owner lives in Oneida and cannot attend to farm. Price, \$5,400. Terms, \$900 down. Address E. Emmons Coe, owner, Oneida, N. Y. Owner will rent.

#### TOWN OF STOCKBRIDGE

Population 1,485

No. 658.—Farm of 75 acres; 2 miles from Stockbridge P. O., R. D.; 2½ mile from railway station at Munnsville on line of N. Y., O. & W. R. R.; 1 mile from school; 1½ miles from Methodist church; 1½ miles from butter and cheese factory; 3 miles from milk station. Highways, good. Nearest city, Oneida, population 8,313, 8 miles distant, reached by rail or highway. Altitude, 1,200 ft. Soil, limestone loam. Acres in alfalfa, 30; in natural pasture, 7; in timber, 6, maple, basswood and elm. Acres tillable, 62. Fruit, 75 apple, 10 pear, 17 plum, and 7 cherry trees, 1 acre black raspberries, 1 acre asparagus. Best adapted to alfalfa, dairying, general farming, etc. Fences, barbed wire. House, 12 rooms in good condition. Outbuildings, basement barn, 70x40; hen house; ice house; silo and wagon house. Watered, house, barns and fields by running water. Occupied by owner. Reason for selling, poor health of owner. Price, \$4,000. Terms, cash, or credit, \$5,000. Farming implements will be included if party pays cash. Address Arthur J. Branagan, Sr., owner, Stockbridge, R. F. D. No. 1, N. Y.

No. 659.—Farm of 100 acres, located 2 miles from Stockbridge P. O. and railway station on line of N. Y. C. & H. R. R.; 2 miles from school; 2 miles from church; 1 mile from cheese factory and 1 mile from milk station. Highways, good. Nearest city, Oneida, population 8,313, 7 miles distant, reached by rail or highway. General surface, rolling. 30 acres of alfalfa, 10 in timber, 2d growth. Acres tillable, 90. Fruit, 50 apple and a few pear trees. Best adapted to general farming, oats, corn, alfalfa, potatoes, etc. Fences, wire, in good condition. Ten-room house, in good condition. Outbuildings: basement barn, 30x100 with 27 stanchions and 5 horse stalls, hog house 20x20, silo, concrete floors in stables, all in good condition. House watered by well, barns, by running water and fields, by running water. Occupied by owner. Reason for selling, wishes to retire. Price, \$7,500. Terms: half cash. Address Charles Lamb, owner, R. D., Stockbridge, N. Y., or J. H. Fort, broker, Stone Building, Oneida, N. Y.

No. 660.—Farm of 200 acres; 1 mile from Stockbridge P. O., R. D.; 1 mile

from railway station at Valley Mills, on line of N. Y., O. & W. R. R.; 1 mile from school and churches;  $\frac{3}{4}$  mile from butter and cheese factory; 1 mile from milk station. Highways, good. Nearest city, Oneida, population 8,313, 8 miles distant reached by rail or highway. Surface of farm, level and sloping. Altitude, 300 feet. Soil, gravel and clay loam. Acres in meadow, 40; in natural pasture, 75; in timber, 20, maple, basswood, hemlock, etc. Acres tillable, 175. Fruit, 1,000 apple, 20 pear, 20 cherry, and 10 plum trees. Best adapted to corn, hops, alfalfa, wheat, oats, etc. Fences, woven and barbed wire. House, 14 rooms, in good condition. Outbuildings, four barns in first class condition, stable room for 40 head of cattle, silos, milk house, hen house, hog pen, ice house and hop house. Watered, house and barns, by running spring water; fields, by brooks and springs. This farm is 15 miles from Oneida lake. Occupied by owner. Reason for selling, wishes to retire. Price, \$25,000. Terms,  $\frac{1}{4}$  cash, balance on mortgage. Address J. E. Quackenbush, owner, Valley Mills, N. Y. Owner will rent with option to buy.

## TOWN OF SULLIVAN

Population 3,367

No. 661.—Farm of 112 $\frac{1}{2}$  acres at Chittenango P. O.; 3 miles from railway station at Chittenango on lines of N. Y. C. and West Shore R. Rs., Oneida Railway trolley;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches of several denominations; 3 miles from milk station. Highways, excellent. Nearest village, Chittenango, population 678. Surface of farm, rolling. Acres in alfalfa, 50. Fruit, small orchard, also plums, pears and peaches sufficient for home use. Best adapted to alfalfa, corn, wheat, oats, barley, potatoes, etc. Fences in good condition. House, brick, 11 rooms. Outbuildings, basement barn with concrete stables, horse barn, hay barn and other buildings, all in good condition. Watered, house, by well; barns, by running water; fields, by stream. Occupied by owner. Reason for selling, to settle an estate. Price, \$100 per acre. Terms, \$5,000 cash, balance on mortgage. Address Miss Florence Walrath, owner, Chittenango, N. Y., or J. H. Fort, agent, Stone Building, Oneida, N. Y.

## MONROE COUNTY

Area, 721 square miles. Population, 283,212. Annual precipitation, 37.5 inches. Annual mean temperature, 49.9°. Number of farms, 5,971. County seat, Rochester.

This county lies in the western part of the state and is bounded on the north by Lake Ontario. It is considered the richest agricultural county in the state. It is intersected by the Genesee River which flows northward and enters the lake seven miles north of Rochester. The county is also well drained by several other streams and creeks.

The surface is nearly level; clay loam soil predominates in the northwestern part of the county and a rich gravelly loam is found in the valleys drained by the Irondequoit and Genesee Rivers. Eighty-nine and three-tenths per cent. of the land area is improved. There are extensive deposits of gypsum, iron ore, water lime and Medina sandstone in the county. It ranks first in the production of apples and wheat, second in peaches and potatoes, third in currants, beans, barley and oats and fourth in strawberries and raspberries. The principal crops are corn, 779,032 bushels; oats, 1,385,560 bushels; wheat, 866,903 bushels; barley, 73,960 bushels; rye, 101,568 bushels; dry beans, 241,502 bushels; potatoes, 2,796,728 bushels; hay and forage, 97,959 tons. The average size of farms is 64 $\frac{1}{2}$  acres. The total valuation of farm property is \$59,764,614, an increase in value of 49.3 per cent. during the past ten years. The average value of land per acre is \$87.92, an increase of \$23.80 during the last decade. The value of improved land is \$113.88 per acre. Domestic animals are as follows: Dairy cows, 17,198; horses, 20,639; swine, 21,786; sheep, 30,700; poultry, 300,139; production of milk, 8,702,188 gallons. The value of all dairy products is \$733,397. Rochester and Buffalo furnish unlimited markets for the produce of the farmers. The county is intersected by the Erie Canal (now being enlarged into a barge canal), by three lines of the New York Central & Hudson River Railroad, also the West Shore; Buffalo, Rochester & Pittsburg; the Pennsylvania and Lehigh Valley railroads and two branches of the Erie railroad. Trolley lines extend in all directions from Rochester, a city of 218,149 inhabitants.

Monroe is noted the country over for its nurseries. It grows annually an immense quantity of seeds, plants and trees. There are 200 district schools, excellent high schools in villages and towns with a state normal school located at Brockport. There are 115 miles of state and county roads and 1,077 miles of improved highways. Twenty-six agricultural organizations are devoted to the interest of the farmer.

## TOWN OF CHILI

Population 2,071

No. 662.—Farm of 154 acres; located 3 miles from Scottsville P. O., R. D., and railway station on line of B., R. & P. R. R.; 2 miles from school; 2 miles from churches and 3 miles from milk station. Highways, good. Nearest city, Rochester, population 218,149, 11 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, all. In natural pasture, 20; in timber, 4, all kinds. Acres tillable, 154. Fruit, small apple orchard. Best adapted to general farming or dairying. Fences, fair, mostly woven wire. 2 houses, 9 and 12 rooms respectively, good condition. Outbuildings: 3 barns, 36x50, 36x42, 36x44, shed 24x50, also garage. Occupied by owner. Reason for selling, other business. Price \$85 per acre. Address Dugald Brooks, owner, Scottsville, N. Y.

## TOWN OF CLARKSON

Population 1,549

No. 663.—Farm of 120 acres; located 3½ miles from Brockport P. O. and railway station, on line of N. Y. C. R. R.; 2½ miles from B. L. & R. trolley; 3½ miles from normal, 1 mile from district school; 3½ miles from churches and milk station. Highways, good. Nearest village, Brockport, population 3,579, 3½ miles distant. General surface, level. Nature of soil, Dunkirk clay loam. Acres in meadow, 30; in natural pasture, 20; in timber, 6, 2d growth. Acres tillable, 110. Fruit, 50 apple trees. Best adapted to beans, corn, hay and general crops. Fences, fair. House, 14 rooms, cistern, well water in kitchen. Outbuildings: gambrel roof barn, nearly new, 32x60, poultry house, hog house and tool house. House, barns and fields watered by well. Occupied by owner. Reason for selling, poor health. Price, \$9,400. Terms, \$5,900 cash, balance on mortgage. Price includes stock and tools. Address L. Lewis Spall, owner, R. D. Brickport, N. Y., or Garfield Real Estate Company, brokers, Rochester, N. Y.

No. 664.—Farm of 116 acres; located 1 mile from Hamlin P. O., and railway station, on line of R., W. & O. R. R.; 5 miles from normal school; ½ mile from district school; 1 mile from churches and milk station. Highways, state road. Nearest village, Brockport, population 3,579, reached by highway and rail. General surface, level. Nature of soil, gravel and sandy loam. Acres in meadow, 26; in natural pasture, 8. Acres tillable, 108. Fruit, 7 acres of apples, 16 acres peaches 5 years old, 3 acres of pears 3 years old, and 30 cherry trees; small fruit for home use. Best adapted to fruit and general farming. Fences, mostly wire. New 2¼-story house, 9 rooms, cistern and furnace. Outbuildings, main barn 30x60, gambrel roof, horse barn 30x45, hog pen 10x20, tool house and cattle shed 12x40. House and barns watered by well, fields, by spring. Occupied by owner. Reason for selling, other business. Price, \$12,500. Terms, mortgage for \$6,700 can remain. Address Wm. Meinhardt, owner, R. D., Clarkson, N. Y., or Garfield Real Estate Company, brokers, Rochester, N. Y.

No. 665.—Farm of 60 acres; located 3 miles from Brockport P. O., R. D. No. 19, and railway station, on line of N. Y. C. R. R. 1¼ miles from school; 3 miles from churches; 3 miles from cheese factory and milk station. Highways, good, state road. General surface, level. Altitude, 525 feet. Nature of soil, Ontario silt loam, in good heart. Acres that can be used as meadow, all; in natural pasture, 5. Acres tillable, 54. Fruit, 110 apple trees, in full bearing, 500 set in 1913, 100 peach and 100 cherry trees set in 1913. Best adapted to fruit, wheat, hay, beans and all crops. Fences, mostly wire, in good condition. House, 10 rooms, good condition, with modern improvements. Outbuildings, gambrel roof barn 40x60, horse barn 20x40, other buildings for poultry, hogs, tools, etc. House watered by well and cistern, barns, by well and fields, by creek. Lake Ontario, 7 miles distant. Occupied by owner. Reason for selling, desires a larger place. Price, \$9,000. Terms, ½ cash, balance on mortgage.



FIG. 303.—HOUSE ON FARM NO. 661, TOWN OF SULLIVAN, MADISON COUNTY



FIG. 304.—HOUSE AND BARN ON FARM NO. 664, TOWN OF CLARKSON, MONROE COUNTY





Address George J. Ronk, owner, Clarkson, N. Y., or Charles A. McBain, broker, Brockport, N. Y.

No. 666.—Farm of 107 acres; located 3 miles from Clarkson P. O.;  $2\frac{1}{2}$  miles from railway station at Adams Basin, on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school; 4 miles from churches and  $2\frac{1}{2}$  miles from milk station. Highways, state road. Nearest village, Brockport, population 3,579, 4 miles distant, reached by highway. General surface, mostly level, some rolling. Altitude, 500 feet. Nature of soil, clay and clay loam. Acres that can be used as meadow, all. Acres tillable, all except orchard. Fruit, 280 apple trees, standard winter varieties, 25 years old; also fruit for family use. Best adapted to wheat, hay, general grain crops. Fences, 400 rods of wire. House, 10 room frame, furnace, good condition. Outbuildings, main barn 34x54, gambrel roof, barn 40x60, hog house, poultry house 12x12, all in good condition except barn 40x60. House watered by well and cistern, barns, by well and fields, by creek. Occupied by owner. Reason for selling, has other business. Price, \$9,000. Terms, \$4,000 cash, balance on mortgage. Address John Sweeting, owner, Clarkson, N. Y., or Charles A. McBain, broker, Brockport, N. Y.

No. 667.—Farm of 120 acres; located 2 miles from Brockport P. O., R. D. No. 19; 2 miles from railway station, on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches; 3 miles from cheese factory and 2 miles from milk station. Highways, good. Nearest city, Rochester, population 218,149, 20 miles distant, reached by rail and highway. General surface, rolling and level. Altitude, 525 feet. Nature of soil, Ontario silt loam. Acres in timber, 17, mostly maple and beech. Acres tillable, 90. Fruit, 40 old apple trees, 398 trees set out in 1909, also other fruit. Best adapted to fruit, beans, wheat, hay, corn, etc. Fences, mostly wire, in good condition. House, 14 rooms, part stone and part frame, good condition. Outbuildings, main gambrel roof barn, 40x100, shed 20x10, shed 16x40, hog house, poultry and storage house, all in good condition. House watered by well and cisterns, barn, by well and fields, by well. Lake Ontario, 8 miles distant. Occupied by owner. Reason for selling, other business. Price, \$21,000. Terms,  $\frac{1}{3}$  or more cash,

balance on mortgage. House arranged for 2 families. This farm has been in family 78 years, never rented. Address A. D. McBain, owner, Brockport, N. Y., or C. A. McBain, broker, Brockport, N. Y.

No. 668.—Farm of 22 acres; located  $\frac{1}{8}$  mile from Clarkson P. O.; 1 mile from railway station at Brockport, on line of N. Y. C. R. R.; 100 yards from school; 1 mile from churches and milk station. Highways, good State road. General surface, level. Altitude, 475 feet. Nature of soil, clay loam. Acres that can be used as meadow, all; in natural pasture, all. Acres tillable, all. Fruit, for family use. Best adapted to hay and general crops. Fences, wire, good condition. House, 2 stories, 13 rooms, brick, good condition. Outbuildings, main barn, gambrel roof 40x50, poultry house 12x30, granary 18x18 and hog house. House watered by well and cistern, barns, by well and fields, by stream. Occupied by owner. Reason for selling desires a larger farm. Price, \$5,600. Terms, \$2,500. Address, Harry C. Nesbitt, owner, Clarkson, N. Y., or Charles A. McBain, Broker, Brockport, N. Y.

No. 669.—Farm 116 acres; located 1 mile from Hamlin P. O. and railway station, on line of N. Y. C. R. R.; 1 mile from school; 5 miles from Normal school;  $\frac{1}{2}$  mile from churches; 1 mile from milk station. Highways, State road. Nearest village Brockport, population 3,579, 5 miles distant, reached by highway. General surface mostly level but slopes a little to southeast. Altitude, 450 feet. Nature of soil gravel loam, good. Acres that can be used as meadow 26, in natural pasture 8, in timber enough for home use. Acres tillable, 108. Fruit, 100 apple trees set in 1911, 160 apple trees set in 1890, 16 acres of 5 year old peaches and  $2\frac{1}{2}$  acres of pears set in 1911. Best adapted to hay, grain, fruit, potatoes, etc. Fences, mostly wire, in good condition. House,  $2\frac{1}{2}$  stories, 9 rooms, built in 1910. Outbuildings, main barn, gambrel roof 30x60, horse barn 30x45, tool and cattle barn 12x40 and hog house 10x20. House watered by well, barns, by well and fields, by stream and pond. Occupied by owner. Lake Ontario, 4 miles distant. Price, \$12,500. Terms:  $\frac{1}{2}$  cash, balance on mortgage. Address, William Meinhardt, owner, Hamlin, N. Y., or Charles A. McBain, Agent, Brockport, N. Y.

## TOWN OF HAMLIN

Population 2,184

No. 670.—Farm of 56¾ acres; located 1 mile from Hamlin P. O. and railway station on line of N. Y. C. R. R.; 1 mile from school; 1 mile from churches and 1 mile from milk station. Highways, State road. General surface, level. Altitude, 275 feet. Nature of soil, silt and gravelly loam. Fruit, 100 apple trees in full bearing, 5 acres of peaches 5 years old and 1 acre of berries. Best adapted to hay, grain, potatoes and fruit. Fences, wire, good condition. House, 2 stories, 8 rooms, good condition. Barn 30x60 with lean-to for tools and cattle protection. House watered by well and cistern, barns by well. Lake Ontario, 3 miles distant. Occupied by heir to estate. Reason for selling to settle an estate. Price, \$7,500. Address, Wm. Knapp, administrator, Hamlin, N. Y., or Charles A. McBain, Broker, Brockport, N. Y.

## TOWN OF PENFIELD

Population 2,977

No. 671.—Farm of 100 acres; located 4½ miles from Fairport P. O., R. D. 2 and railway station on line of N. Y. C. R. R.; ¼ mile from school and churches; 6 miles from butter and cheese factory. Nearest city Rochester, 14 miles distant, population 218,149, reached by rail and State road. General surface, rolling. Nature of soil, muck and gravelly loam. Acres in pasture, 5; in timber 7, variety; acres tillable, 88. Fruit, 2 acres of apples; 1 acre of Bartlett pears. Best adapted to general farming. Fences, rail and wire, fair. House, 20 rooms in good condition. Gambrel roof barn 30x90 and outdoor sheds. House and barn watered by well; fields, by spring. Occupied by owner. Reason for selling, desires smaller farm. Price, \$10,500. Terms, part cash. Address, E. F. Beaumont, owner, Penfield, N. Y.

## TOWN OF EGA

Population 1,553

No. 672.—Farm of 10 acres; located 4 miles from Churchville P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 mile from school; 4 miles from churches. Nature of highway, good. General surface of farm, level. Nature of soil, loam. Acres tillable, all. Fruit, 2½ acres of strawberries; 3 acres of raspberries; ¼ acre of grapes, pears, peaches, etc. Best adapted to fruit and

garden truck. House, two stories, 9 rooms, good. Barn, new, gambrel roof. 20x22; poultry house and corn crib. House watered by well. Occupied by owner. Reason for selling, ill health. Price, \$2,000. Terms, half cash. Address, C. D. Reynolds, owner, R. D., Churchville, N. Y., or Chapman's Real Estate Agency, agent, LeRoy, N. Y.

No. 673.—Farm of 10 acres; located 3½ miles from Churchville P. O. and railway station, on line of N. Y. C. and W. S. R. R.; 3½ miles from churches and milk station. Highways, good. Nearest city Rochester, population 218,149, 18 miles distant, reached by rail and highway. General surface, level. Nature of soil, loam. Acres in natural pasture, 5. All tillable. Fruit, 14 apple trees, 2½ acres of strawberries, 3 acres of raspberries, ¼ acre of grapes. Best adapted to general crops and fruit. Fences, fair. House, 2 stories, 9 rooms, fair condition. Barn 20x22 with gambrel roof. House watered by well, barn by well. Occupied by owner. Reason for selling, ill health. Price, \$2,100. Terms, \$1,400 cash, balance on mortgage at 6 per cent. Address, C. D. Reynolds, owner, R. F. D., Churchville, N. Y., or G. A. Johnson, Broker, Churchville, N. Y.

No. 674.—Farm of 75 acres, located 2 miles from Churchville P. O. and railway station on lines of N. Y. C. and W. S. R. R.; 2 miles from high school; 2 miles from churches; 2 miles from milk station. Highways, good. Nearest city Rochester, population 218,149, 16 miles distant, reached by rail or highway. General surface, level. Nature of soil, dark loam and some muck. Acres that can be used as meadow, 3, in natural pasture, 1, in timber, 8, virgin, beech, maple and cedar. Best adapted to general crops, celery and vegetables. Fences, fair. House, 2 stories, 7 rooms, in good condition. Outbuildings: basement barn 36x60, horse barn 18x36 and other buildings. House watered by wells and barns by wells. Occupied by owner. Price, \$4,500. Terms, \$2,200 cash, balance on mortgage at 5%. Address Fred Pimm, owner, Churchville, N. Y., or G. A. Johnson, broker, Churchville, N. Y.

No. 675.—Farm of 90 acres, located ¼ mile from Churchville P. O. and railway station on line of N. Y. C. and H. R. R. R.; ¼ mile from school; ¼ mile from churches and milk station. Highways, good. Nearest city Rochester, population 218,149, 15 miles distant,

reached by rail or highway. General surface, level. Nature of soil, loam. Acres that can be used as meadow, 27; in natural pasture, 8; in timber, 8. Acres tillable, 80. Fruit, 50 bearing apple trees and small fruit for family use. Best adapted to general crops. Fences, fair condition. House, 2-stories, 10 rooms, fair condition. Outbuildings: main barn 28x48, horse barn and small buildings. House watered by wells, barns by wells. Occupied by owner. Reason for selling desires a smaller farm. Price, \$7,500. Terms \$4,000 cash, balance on mortgage at 5%. Address Frank J. Sprass, owner, Churchville, N. Y., or George A. Johnson, broker, Churchville, N. Y.

No. 676.—Farm of 137 acres, located  $\frac{3}{4}$  mile from Churchville P. O. R. D. and railway station on line of N. Y. C. and West Shore R. Rs.;  $\frac{3}{4}$  mile from school and churches;  $\frac{3}{4}$  mile from milk station. Highway, state road. Nearest city, Rochester, population 218,149, 15 miles distant, reached by rail or highway. General surface, level. Nature of soil, clay loam. Acres in meadow, 35; in pasture, 16; acres tillable, all. Best adapted to general crops. Fences, wire. House, old, 9 rooms, in good condition. Outbuildings: barn, 36x70, 8 stalls, good condition; hen house, hog house, shed for tools and wagon. House, barns and fields watered by wells. Occupied by tenant. Reason for selling, to settle estate. Price, \$13,700. Terms, \$5,000 down. Address A. W. Randall, owner, 155 West Main street, Rochester, N. Y., or George A. Johnson, agent, Churchville, N. Y.

No. 677.—Farm of 218 acres, located  $3\frac{1}{2}$  miles from Bergen P. O., R. D. and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{3}{4}$  mile from churches. Highway, good. General surface, level. Nature of soil, black loam and gravelly loam, some muck. Acres in meadow, 50; in pasture, 25; in timber, 18, first and second growth of elm and maple; acres tillable, 150. Fruit, 115 apple trees, part bearing, small fruit for family use. Best adapted to general farm crops. Fences, wire and rail. House, 2 stories, 8 rooms; tenant house, 2 stories, 9 rooms, both in good condition. Outbuildings: barn, 36x68, basement; horse barn, 30x40; hen, hog and corn houses. House and barn watered by four wells. Occupied by owner. Reason for selling, ill health. Price, \$12,000. Terms, half cash. Address Wm. H. Johnson, owner, R. D., Bergen, N. Y., or

George A. Johnson, agent, Churchville, N. Y.

No. 678.—Farm of 179 acres, located 3 miles from Churchville P. O., R. D. and railway station on line of N. Y. C. and West Shore R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches; 3 miles from milk station. Highway, state road. General surface, level. Nature of soil, gravelly and loam. Acres in meadow, 50; in pasture, 8; in timber, 2, second growth; acres tillable, 170. Fruit, 50 apple trees, small fruit for family use. Best adapted to general farm crops. Fences, wire, fair condition. House, 2 stories, 24 rooms. Outbuildings: barn, 36x100, basement; horse barn, 30x40; hog and corn houses. Occupied by tenant. Possession will be given not later than first day of February following sale. Reason for selling, to settle estate. Price, \$10,000. Address G. F. Wickins, owner, Scottsville, N. Y., or George A. Johnson, agent, Churchville, N. Y.

No. 679.—Farm of 117 acres, located  $\frac{1}{2}$  mile from Churchville P. O. and railway station on line of N. Y. C. and West Shore R. R.;  $\frac{1}{2}$  mile from school and churches. Highways, good. General surface, level. Nature of soil, sandy loam. Acres in meadow, 17; in timber, 8, second growth; acres tillable, 109. Fruit, 6 acres of bearing apples. Best adapted to general farm crops. Fences, fair condition. House, 2 stories, 9 rooms, good; tenant house, 2 stories, 9 rooms, good. Outbuildings: barn, 30x100, gambrel roof basement; barn, 16x26; hen house, 12x20; shop, 12x20; hog house and corn house. House watered by 3 wells, barns, by wells. Occupied by owner. Reason for selling, ill health. Price, \$12,000. Terms, half cash, balance on mortgage at 5%. Address A. J. Hall, owner, Churchville, N. Y., or George A. Johnson, agent, Churchville, N. Y.

#### TOWN OF SWEDEN

Population 4,885

No. 680.—Farm of 100 acres, located 4 miles from Churchville P. O., R. D. and railway station; on line of N. Y. C. and West Shore railroads; 1 mile from school; 4 miles from churches. Highway, state road. General surface, level. Nature of soil, limestone, clay subsoil. Acres in meadow, 35; in timber, 10, hard maple. Fruit, 140 bearing apple trees;

500 2-year-old cherry trees, other fruit. Best adapted to general farm crops. Fences, good. House, 12 rooms. Out-buildings: barn, 30x70; horse barn, 24x35; hog house, 20x24; corn crib, 12x16. House, fields and barns watered by well. Occupied by tenant. Price, \$9,500. Terms, \$4,500 down, first mortgage, \$2,500. Address M. J. Bruton, owner, Churchville, N. Y., or George A. Johnson, agent, Churchville, N. Y.

No. 681.—Farm of 14.3 acres, located  $\frac{1}{2}$  mile from Brockport P. O.;  $\frac{1}{10}$  mile from railway station; on line of B. L. & R. trolley;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches and milk station. Highways, good. General surface, level. Altitude, 540 feet. Nature of soil, clay loam and about 4 acres of gravel loam. Acres tillable, all. Best adapted to hay or general grain crops. Fences, wire and rail, need some repairs. No house, barn 20x40 in good condition. Fields watered by stream. Erie canal across the road. Reason for selling to settle an estate. Price, \$1,500. Terms, \$900 cash, balance on mortgage. B. L. & R. trolley

stops on land, 35 minutes to Rochester. Address D. R. Wilson, administrator, Brockport, N. Y., or Charles A. McBain, broker, Brockport, N. Y.

No. 682.—Farm of 55 acres, located in village of Brockport;  $\frac{1}{4}$  mile from railway station on line of N. Y. C. R. R.;  $\frac{3}{8}$  mile from school and churches. Highways, state road. General surface, rolling. Altitude, 540 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 20. Acres tillable, all. Fruit, 1,000 trees in bearing, different varieties. Best adapted to fruit, berries, grains, etc. Fences, wire, in good condition. House, 2 $\frac{1}{2}$ -stories, 10 rooms, all conveniences, also tenant house. Two gambrel roof barns, excellent condition. House watered by well and city water. barns by wells. Occupied by owner and tenant. Reason for selling wishes to retire. Price, \$14,000. Terms, \$5,000 cash, balance on mortgage. Forty minutes from Rochester. Address Miss Adelle F. Gleason, Brockport, N. Y., or Charles A. McBain, broker, Brockport, N. Y.

### MONTGOMERY COUNTY

Area, 396 square miles. Population, 57,567. Annual precipitation, 36.95 inches. Annual mean temperature, 49.3°. Number of farms, 2,189. County seat, Fonda.

This county is situated in the eastern part of the state in the Mohawk Valley which traverses the county through its center from east to west. It is also drained by the Schoharie River. Most of the surface is undulating interspersed with level stretches, but the long and fertile valley of the Mohawk is level. The soil in this valley is a rich black loam with areas of gravelly loam. In the rolling lands in the southern part of the county limestone and black slate are much in evidence, giving high adaptation to pasturage. Quarries of Trenton limestone and other good building stone are found in the county.

While adapted to all kinds of farming the leading crops were: corn, 38,357 bushels; oats, 726,120 bushels; buckwheat, 133,434 bushels; potatoes, 193,644 bushels; hops, 148,329 pounds; hay and forage, 130,173 tons. Total valuation of all farm property is \$15,460,574, an increase of 19.6 per cent. over the last census. Montgomery is another of the many counties of the state where the price of land should double in value in the next ten years; the present value of improved lands being \$50.51 per acre and of the land alone, \$26.92. Domestic animals are reported from almost every farm in the county classified as follows: Dairy cows, 22,804; horses, 7,639; swine, 9,098; sheep, 3,902; poultry, 143,302; milk produced, 13,135,104 gallons; value of all dairy products, \$1,277,634.

The county is intersected by the Erie canal, the New York Central & Hudson River; Fonda, Johnstown & Gloversville, and West Shore railroads. Electric lines also connect Fonda, Johnstown, Gloversville and Amsterdam with Albany, Schenectady and Troy. Amsterdam, the metropolis of the county, has a population of 31,276, contains two academies, large carpet mills, knitting mills and other industries. There are ample home markets for garden truck, fruit and other products of the farm. There are 109 district schools, 11 agricultural societies and organizations, 70 miles of state and county roads and 635 miles of other improved highways.

TOWN OF CANAJOHARIE

Population 3,889

No. 683.—Farm of 11 acres, located 1 mile from Ames P. O., R. D.; 6 miles from railway station at Canajoharie on lines of New York Central and West Shore Railroads; 1 mile from school and churches; 1 mile from butter and cheese factory and milk station. Highway, state road. General surface, rolling, some level. Altitude, 800 feet. Nature of soil, clay loam; all tillable. Fruit, 50 apple trees, 15 pears, 42 plums, 135 Perfection currant, 3 quince, 10 cherries, 6 grape vines and other small fruit. Fences, barbed wire, new. House, 10 rooms, 1½ stories, good condition. Outbuildings: barn, large and new; hog house, hen house, new hennery, 14x50, concrete floor. House watered by good well; creek near barn. Best adapted for fruit and poultry. Occupied by owner. Reason for selling, owner a widow. Price, \$1,800. Terms, \$1,200 down. Address Marion B. Smith, owner, Ames, N. Y.

TOWN OF CHARLESTON

Population 900

No. 684.—Farm of 300 acres, 2 miles from Charleston-Four-Corners; 9 miles from Fultonville station; 5 miles from Glen Village P. O., R. D. Fifty acres in woodland; 250 acres in meadow. Best adapted to hay, grain and dairying. House, small, needs repairing. Barns, 30x60, 26x64; hop barn, 26x44, fair condition. Watered by well and spring. Fences, fair. Price, \$10 per acre. Terms, ½ cash, balance on mortgage, if desired. Address R. B. Fish, Fultonville, N. Y. Owner will rent.

TOWN OF FLORIDA

Population 1,904

No. 685.—Farm of 97 acres, located 5 miles from Amsterdam P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.; ¾ mile from school; 1½ miles from churches; 5 miles from milk station. Highways, good. Nearest city Amsterdam, population 21,267, 5 miles distant, reached by highway or rail. Surface of farm, level. Altitude, 400 feet. Nature of soil, clay bottom. Acres in meadow, 9; in timber, 7, young growth. Acres tillable, 90. Fruit, about 2 acres of fall and winter apples. Best adapted to hay and grain. Fences, wire, good. House, 2 stories. Outbuildings: new barn. House watered by well, barns by

well. Reason for selling, to settle an estate. Price, \$4,000. Address Mrs. Chas. I. Schuyler, heir, Amsterdam, N. Y., R. D. No. 2.

No. 686.—Farm of 117 acres, located 5 miles from Amsterdam P. O., R. D. No. 2 and railway station on line of N. Y. C. R. R.; 1½ miles from school and churches; 5 miles from milk station. Highways, good. General surface, rolling. Altitude, 500 feet. Nature of soil, mostly black slate. Acres in meadow, 70; in pasture, 30; in timber, 17; hard and soft wood. Acres tillable, 70. Fruit, apples, winter varieties. Best adapted to hay and grain. Fences, wire, in good condition. House, 2 stories, good condition. Barn, large and in good condition. House, watered by well, barn by running water, fields by springs. Occupied by tenant, leased annually. Reason for selling, owner a widow. Price, \$6,000. Address Edgar Young, administrator, Amsterdam, N. Y., R. D. No. 1.

TOWN OF GLEN

Population 2,002

No. 687.—Farm of 250 acres, located 3 miles from Glen P. O., R. D.; 3½ miles from railway station at Auriesville on line of W. S. R. R.; 1½ miles from school; 3 miles from churches and milk station. Nearest city Amsterdam, 8 miles distant, population 21,267, reached by rail and highway. General surface, rolling and level. Nature of soil, black slate loam. Acres in meadow, 200; in pasture, 28; in timber, 20, red and white oak. Acres tillable, 200. Fruit, for family use. Best adapted to wheat, barley, oats, alfalfa and clover. Fences, wire, in fair condition. House, 25x30, fair condition. Outbuildings: barn 36x80 with basement, hay barn 28x80 with 20-ft. posts. All new. House watered by well, barns by running water, fields by brook. Occupied by tenant. Reason for selling, ill health. Price, \$15,000. Terms ½ cash. Address E. J. Bell, owner, Fultonville, N. Y.

TOWN OF MOHAWK

Population 2,488

No. 688.—Farm of 120 acres, located 4 miles from Fonda P. O., R. D. No. 1; 1 mile from railway station at Yost on line of N. Y. C. R. R.; 100 yards from school; 4 miles from Catholic and Protestant churches; 5 miles from milk station and milk condensing plant. Highways, good. Surface of farm, rolling.

Soil, gravel loam. Acres in meadow, about 40; in natural pasture, about 35; in timber, 3, pine, hemlock, etc. Acres tillable, 100. Fruit, good orchard. Adapted to any crops grown in this climate. Fences, stone wall, wire and post. House, 30x45. Outbuildings: barn,

35x65; shed, 30x50; barn, 28x40; barn, 30x34 and other necessary buildings. Watered by springs. Occupied by tenant. Reason for selling, owner a widow. Price, \$8,000. Terms easy. Address: Mrs. R. R. Schuyler, owner, Fonda, N. Y.

## NIAGARA COUNTY

Area, 504 square miles. Population, 92,036. Annual precipitation, 29.6 inches. Annual mean temperature, 48.6°. Number of farms, 4,346. County seat, Lockport.

This county is located in the western part of the state, bordering on Canada. Separated by the Niagara River and the famous Niagara Falls. Its northern boundary is Lake Ontario.

The surface features of the northern part of the county are quite level, but in the southern and eastern portions are found gentle undulations; more than one-half of the surface, however, is level. A rich, sandy and gravelly loam is found on a strip of land extending from the lake to the interior of the county about ten miles in width. A strong clay loam, very productive, is found in the southern portions of the county. Niagara limestone is extensively quarried in some sections. The county is adapted to all forms of agriculture. It is especially noted as being one of the greatest counties of the country in the production of apples, pears, peaches, quinces, etc., producing these in enormous quantities from orchards kept in the highest state of cultivation. In crops there were produced 728,478 bushels of corn; 996,239 bushels of oats; 577,082 bushels of wheat; 32,237 bushels of barley; 73,273 bushels of dry beans; 663,192 bushels of potatoes, and 82,448 tons of hay and forage. The total value of farm property is \$39,665,809, an increase of 69 per cent. over the census of 1900. This increase is exceeded by only one agricultural county in the state. The average value of improved lands, including buildings, is \$111.12 per acre and the average value of farm land per acre is \$74.85, an increase of \$29.15 per acre in the last decade. The county reports dairy cows, 13,058; horses, 15,510; swine, 17,502; sheep, 28,241; poultry, 261,290; production of milk, 6,098,086 gallons, amounting to \$448,356. Buffalo with its nearly half a million inhabitants only twenty-five miles from the center of the county, furnishes ample market for products. The county is traversed by the Erie Canal and several important railroads and electric lines. The city of Niagara Falls contains many large manufacturing establishments and hotels, which during the summer months are filled with tourists. Lockport contains six flour mills and numerous saw mills. There are 155 district schools in the county, which with the many high schools, De Veaux College and Niagara University furnish exceptional educational advantages for the students. Eight agricultural organizations are devoted to the best interests of the farmer. The county has 62 miles of state and county roads and 387 miles of improved highways. The county ranks third in the production of wheat and fourth in corn.

### TOWN OF CAMBRIA

Population 1,741

No. 689.—Farm 113½ acres, located 5 miles from Lockport P. O., R. D. No. 1; 4 miles from railway station at Wright's Station on line of L. & O. trolley; 1 mile from school; 2 miles from churches and 4 miles from milk station. Highways, good. General surface, nearly level, sloping slightly northward. Altitude, 390 feet. Nature of soil, sandy and clay loam. Acres that can be used as meadow, 90; in timber, 13, maple and elm, second growth. Acres tillable, 100. Fruit, 6 acres of early apples, 120 Bartlett pear, 100 cherry, 100 prune

and 40 peach trees. Best adapted to fruit, hay, grain, potatoes, cabbage and tomatoes. Fences, wire, fair condition. House, 2-stories, 8 rooms, fine verandas and lawn. Outbuildings: barn 46x50, full basement and barn 16x24, corn crib and poultry house, all well painted. House watered by well, barns by well, fields by springs. Occupied by owner. Reason for selling, has other business. Price, \$14,000. Terms, \$10,000 cash, balance on mortgage at 5%. Full equipment of stock and tools will be included for \$16,000. Address De Witt Lindsay, owner, R. D. No. 1, Lockport, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

No. 690.—Farm of 125 acres, located 6 miles from Lockport P. O., R. D. No. 1; 4 miles from railway station at Wrights on line of L. & O. trolley;  $\frac{1}{2}$  mile from school; 1 mile from church and 4 miles from milk station. Highways, good. General surface, nearly level. Altitude, 390 feet. Nature of soil, sandy and clay loam. Acres that can be used as meadow, 80; in timber, 16, maple, elm and oak. Acres tillable, 109. Fruit, 7 acres of apples, Baldwins, Kings and Greenings, 4 acres pears, 6 acres peaches and 1 acre of quinces. Best adapted to apples, peaches, pears, grain and potatoes. Fences, wire, good condition. House, 2-story cobblestone, 12 rooms, furnace heat, also tenant house,  $1\frac{1}{2}$  stories, 8 rooms, good condition. Outbuildings: barn 40x80, full basement, barn 20x30, poultry house and stone hog house. House watered by well and cistern, barns by well and fields by spring. Occupied by tenant. Reason for selling, ill health. Price, 15,000. Terms, \$7,500 cash, balance on mortgage. Address Willard See, owner, R. D. No. 1, Lockport, N. Y., or Arthur Bowen, broker, Hartland road, Gasport, N. Y.

## TOWN OF HARTLAND

Population 2,638

No. 691.—Farm of 34 acres, located  $3\frac{1}{2}$  miles from Gasport P. O., R. D. No. 30, and railway station on line of N. Y. C. R. R. and Buffalo trolley;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from church;  $3\frac{1}{2}$  miles from milk station. Highways, good, State roads. General surface, level. Altitude, 510 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 27; in natural pasture, 7; in timber, 5, young growth. Acres tillable, 27. Fruit, 60 bearing apple trees, 100 apple trees, 5 years old; 75 pear, 100 cherry and 50 plum trees. Best adapted to fruit and truck gardening. Fences, good condition. House, 8 rooms, good condition. Barn 30x40, gambrel roof, concrete floor, good condition. House watered by well, barns by well. Occupied by owner. Reason for selling, retiring. Price, \$6,000. Terms  $\frac{1}{2}$  cash, balance on mortgage. Address John Garbutt, owner, R. D. No. 39, Gasport, N. Y., or Hays Mercantile Agency, 42 Falls street, Niagara Falls, N. Y.

No. 692.—Farm of 100 acres, located 4 miles from Gasport P. O. and railway station on line of N. Y. C. R. R. and B. L. & R. trolley;  $\frac{1}{4}$  mile from school; 1 mile from church; 4 miles from milk

station. Highways, good. Nearest city Lockport, population 17,970, 9 miles distant, reached by rail or highway. General surface, nearly level, well drained. Altitude, 425 feet. Nature of soil, sandy and gravelly loam. Acres in meadow, 75; in natural pasture, 8. Acres tillable, 97. Fruit, 13 acres of apples, 400 peach, 400 pear, 200 cherry, 10 plum and 10 prune trees. Best adapted to fruit, grain, vegetables and stock. Fences, rail and wire, good condition. House,  $2\frac{1}{2}$  story frame, 12 rooms. Outbuildings: barn 32x50, and 40x80, poultry house, hog house and corn crib. House watered by well, barns, by 2 wells. Occupied by owner. Reason for selling, owner has other business. Price, \$12,000. Terms, \$5,000 cash, balance at 5%. House built in 1913, modern improvements. Address Arthur Bowen, owner, Hartland road, Gasport, N. Y.

No. 693.—Farm of 77 acres, located 3 miles from Gasport P. O. and railway station on line of N. Y. C. and H. R. R. R. and B. L. & R. trolley;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from church and 3 miles from milk station. Highways, State road. Nearest city Lockport, population 17,970, 8 miles distant, reached by rail or trolley. General surface, nearly level. Altitude, 400 feet. Nature of soil, rich sandy loam, clay subsoil. Acres in meadow, 62; in timber, 5; second growth. Acres tillable, 72. Fruit, 6 acres of apples, full bearing and 4 acres of young peach trees. Best adapted to fruit and grain. Fences, rail and woven wire, good condition. House, 2-story frame, 10 rooms, recently redecorated. Barn 30x40, well built, needs painting. House watered by well and cistern, barns by well. Occupied by owner. Reason for selling, ill health. Price \$7,500. Terms, \$5,300 cash, balance on mortgage at 5%. Address Herman Fisher, owner, R. F. D., Gasport, N. Y., or Arthur Bowen, broker, Hartland road, Gasport, N. Y.

No. 694.—Farm of 76 acres, located 3 miles from Barker P. O. and railway station; on line of R. W. & O. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from church and 3 miles from milk station. Highways, good. Nearest city, Lockport, population 17,970, 11 miles distant, reached by rail or highway. General surface, nearly level. Altitude, 350 feet. Nature of soil, gravelly and black loam. Acres in meadow, 50; in natural pasture, 10; in timber, 16, second growth. Acres

tillable, 60. Fruit, 20 cherry and 5 plum trees. Best adapted to grain and vegetables. Fences, rail and wire, fair condition. House,  $1\frac{1}{2}$  stories, 7 rooms, nearly new. Outbuildings: barn 30x50, built 8 years, poultry house, hog house and shop, need painting. House watered by well. Lake Ontario, 5 miles distant. Occupied by owner. Reason for selling, other business. Price, \$3,800. Terms, \$2,800 cash, balance on mortgage at 5%. Address George Gould, owner, R. F. D., Barker, N. Y., or Arthur Bowen, broker, Hartland road, Gasport, N. Y.

No. 695.—Farm of 52 acres, located 3 miles from Gasport P. O., R. D. No. 39, and railway station on line of N. Y. C. R. R. and B. L. & R. trolley;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from church and 3 miles from milk station. Highways, State road. Nearest city Lockport, population 17,970, 8 miles distant, reached by rail and highway. General surface, nearly level, sloping north. Altitude, 400 feet. Nature of soil, gravelly loam. Acres in meadow, 35; in timber, 5, oak, beech and maple, second growth. Acres tillable, 47. Fruit, 120 apple trees in full bearing, 250 young apple, 500 peach bearing, 117 cherry and 26 pear trees. Best adapted to fruit, potatoes, cabbage and roots. Fences, wire, in good condition. House, 2-stories, 9 rooms, fine cellar, nicely situated. Outbuildings: barn 30x40, with full basement and well painted, poultry house, hog house and small greenhouse. House watered by wells, barns by well and fields by springs. Occupied by owner. Reason for selling, desires a larger farm. Price, \$9,000. Terms, \$6,400 cash, balance on mortgage at 5%. Address T. B. Ackley, owner, R. D. No. 39, Gasport, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

No. 696.—Farm of  $54\frac{1}{4}$  acres; located  $4\frac{1}{2}$  miles from Middleport P. O. and railway station, on line of N. Y. C. R. R. and B. L. & R. trolley;  $\frac{1}{2}$  mile from school;  $\frac{1}{4}$  mile from church and  $4\frac{1}{2}$  miles from milk station. Highways, state road. Nearest city, Lockport, population 17,970, 11 miles distant, reached by rail or highway. General surface, nearly level, sloping to north. Altitude, 400 feet. Nature of soil, rich, fine sandy loam. Acres that can be used as meadow, 13. Acres tillable, all. Fruit, 700 apple, 200 peach, 800 pear, 200 cherry and 10 plum trees, cur-

rants and berries. Best adapted to fruit and grain. Fences, rail and wire, good condition. House,  $1\frac{1}{2}$  stories, 10 rooms, modern improvements. Outbuildings, barn 40x48, basement 30x40, electric lights, poultry house, hog house, shop and tool house. House watered by well and cistern, barns, by well and fields, by well. Occupied by owner. Reason for selling, old age. Address Mrs. C. A. Bailey, owner, Middleport, N. Y., or Arthur Bowen, broker, Hartland Road, Gasport, N. Y.

No. 697.—Farm of 53 acres; located 4 miles from Middleport P. O. and railway station, on line of N. Y. C. R. R. and B. L. & R. trolley;  $\frac{3}{4}$  mile from school; 4 miles from churches and milk station. Highway, good. Nearest city, Lockport, population 17,970, 12 miles distant, reached by highway. General surface, level. Nature of soil, sandy and black gravel. Acres in timber, 2. Acres tillable, 50. Fruit, 100 apple trees, Baldwins, 400 Bartlett and Seckel pears. Best adapted to general crops and fruit. Fences, fair condition. House,  $1\frac{1}{2}$  stories, 6 rooms, good condition. Basement barn 30x40, good condition, other buildings, in good condition. House watered by wells, barns, by well. Occupied by owner. Price, \$3,800. Terms, \$1,000 cash, balance on mortgage at 6%. Address Harvey Stiner, owner, Middleport, N. Y., or Citizens State Bank, brokers, Lyndonville, N. Y.

No. 698.—Farm of 87 acres; located 6 miles from Middleport P. O. and railway station on line of N. Y. C. R. R. and B. L. & R. trolley; 20 rods from school; 6 miles from churches; 6 miles from cheese factory and milk station. Highways, good. Nearest city, Lockport, population 17,970, 14 miles distant, reached by highway. General surface, rolling. Nature of soil, gravelly loam. Acres that can be used as meadow, 12; in natural pasture, 12. Acres tillable, 75. Fruit, 650 apple trees, different varieties, full bearing, 3 acres of Bartlett and Kiefer pears, fruit for home use. Best adapted to general crops and fruit. Fences, very good. House, 2 stories, 10 rooms, good condition, nearly new. Outbuildings, main barn 32x88, poultry house 12x100, other buildings, all in good condition. House watered by wells, barns, by wells and fields, by creek. Occupied by tenant. Reason for selling, other business. Price, \$16,000. Terms, \$5,000 cash, bal-



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## TOWN OF LEWISTON

Population 3,263

No. 699.— Farm of 75 acres; located 3 miles from Model City P. O. and railway station on line of R., W. & O. R. R.; 1 mile from school; 3 miles from churches; 3 miles from milk station. Nearest city, Niagara Falls, population 30,445, 4 miles distant, reached by level highway. General surface, level. Altitude, 600 feet. Nature of soil, Dunkirk loam and clay loam. Acres in pasture, 3; in timber, 3, hardwood, not many large trees. Acres tillable, 72. Fruit, 500 bearing apple, 400 bearing pear, 50 peach bearing, 500 cherry trees bearing. Best adapted to fruit, alfalfa, gardening, hay and grain. Fences, all good, mostly wire. House, 7 rooms, in good repair. Two barns, 40x60 and 30x40. House and barns watered by wells. Occupied by owner. Reason for selling, ill health of wife. Price, \$11,000. Terms, \$5,000 cash. Address Stanley Glennie, owner, Lewiston, N. Y., or Hays Mercantile Agency, brokers, 42 Falls St., Niagara Falls, N. Y.

No. 700.— Farm of 192 acres; located 1½ miles from Model City P. O. and railway station on line of R., W. & O. R. R.; ¼ mile from school; 1½ miles from church; 1½ miles from milk station. Highways, good. Nearest city, Niagara Falls, population 30,445, 10 miles distant, reached by rail and highway. General surface, level. Altitude, 340 feet. Nature of soil, clay loam, very rich. Acres that can be used as meadow, 80; in natural pasture, 4; in timber, 4, rather light. Acres tillable, 188. Fruit, 6,000 pear, 18 years old, 2,000 prune, 18 years old, 2,000 plum, 8 years old, 1,000 apple trees, 4 years old. Best adapted to fruit and general farming. Fences, good condition. House, 9 rooms, good condition, also tenant house, 9 rooms. Outbuildings: 2 sets of barns, good condition, several small buildings. House watered by well, barns by well. Lake Ontario, 6 miles distant. Occupied by owner's hired man. Reason for selling, wishes to retire. Price, \$26,000. Terms, ½ cash, balance on mortgage at 5%. Address Willard Hopkins, owner, Lewiston, N. Y.,

or Hays Mercantile Agency, 42 Falls St., Niagara Falls, N. Y.

No. 701.— Farm of 222 acres; located 2½ miles from Ransomville P. O. and railway station, on line of R., W. & O. R. R.; ¼ mile from school; 2 miles from churches; 2½ miles from milk station. Nearest city, Niagara Falls, population 30,445, 14 miles distant, reached by rail or highway. General surface, level. Altitude, 500 feet. Nature of soil, gravelly, black and silt loam. Acres in timber, 18, hardwood. Acres tillable, 204. Fruit, 36 acres of full bearing apples; 4 acres of peaches; 5 acres of pears. Best adapted to fruit and gardening. House, 9 rooms, good condition; 2 other houses for tenants. Outbuildings: 2 sets of large basement barns and windmill. Houses watered by well and cistern, barns by well and windmill. Occupied by owner. Reason for selling, wishes to change residence. Price, \$30,000. Terms, about half cash. Address F. S. Burton, owner, Ransomville, N. Y., or Hays Mercantile Agency, brokers, 42 Falls St., Niagara Falls, N. Y.

No. 702.— Farm of 96 acres; located 2 miles from Model City P. O. and railway station on line of R. W. & O. R. R.; ¼ mile from school; 1½ miles from churches; 2 miles from milk station. Highways, State road. Nearest city, Niagara Falls, population 30,445, 7 miles distant, reached by trolley or highway. General surface, level. Altitude, 340 feet. Soil in high state of cultivation. Acres tillable, all. Fruit, 40 apple trees. Best adapted to fruit and gardening. Fences, wire, fine condition. House, frame, 8 rooms. Horse barn; another barn, 40x60, fair condition. House and barns watered by wells. Occupied by tenant. Lease expires, April, 1915. Price, \$7,000. Terms, \$3,500 cash, balance on mortgage at 5%. Address Mrs. Gilbert Wagner, owner, 2815 Whirlpool avenue, Niagara Falls, N. Y., or Hays Mercantile Agency, brokers, 42 Falls St., Niagara Falls, N. Y.

No. 703.— Farm of 15 acres; located 4 miles from Niagara Falls P. O.; 4 miles from railway station on line of N. Y. C. R. R.; ¼ mile from school; 4 miles from churches; 4 miles from milk station. Highways, state road. Population of Niagara Falls, 30,445, reached by highway. General surface, level. Altitude, 600 feet. Acres in meadow, 15. Fruit for home use. Best

adapted to gardening, hay and grain. Fences, fine. House, 8 rooms, frame, good condition. Barn, 40x60, good repair, good stables. House and barn watered by well. Occupied by tenant. Reason for selling, owner has other property to look after. Price, \$4,500. Terms,  $\frac{1}{2}$  cash. Address David Grauer, owner, LaSalle, N. Y., or Hays Mercantile Agency, brokers, 42 Falls St., Niagara Falls, N. Y.

#### TOWN OF LOCKPORT

Population 2,399

No. 704.—Farm of 115 acres; located 2 miles from Lockport P. O., R. D. No. 8, and railway station on line of N. Y. C. R. R. and B. L. & R. trolley;  $\frac{1}{2}$  mile from school; 2 miles from churches; 2 miles from butter factory and milk station. Highways, brick and gravel. General surface, slightly rolling. Altitude, 415 feet. Nature of soil, sandy and gravelly loam. Acres in meadow, 75; in natural pasture, 15. Acres tillable, 100. Fruit, 5 acres of apples, Baldwins, Greenings and Kings, 7 acres of pears, 7 acres of peaches and 25 cherry trees. Best adapted to fruit, wheat, hay, potatoes and garden crops. Fences, wire, in good condition. House, 2 stories, 11 rooms, good cellar, good condition. Outbuildings: barn 34x50, full basement, barn 40x20, hog house, tool house, poultry house, need painting. House watered by well, barns by pumps; fields by small stream. Occupied by owner. Reason for selling, old age. Price, \$11,500. Terms, \$2,000 cash, balance on mortgage at 5%. Address Fred Duchow, owner, R. D. No. 8, Lockport, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

#### TOWN OF NEWFANE

Population 4,060

No. 705.—Farm of 113 acres; located  $2\frac{1}{2}$  miles from Newfane P. O., R. D. 27, and  $1\frac{1}{2}$  miles from railway station at Corwins on line of International Trolley Line of Lockport, Buffalo, Niagara Falls and Rochester;  $2\frac{1}{2}$  miles from school and churches;  $1\frac{1}{2}$  miles from milk station. Highway, state road. General surface, level. Altitude, 360 feet. Nature of soil, Dunkirk sandy loam. Acres in meadow, 16; in natural pasture, 10; in timber, 2, elm, maple and beech. All tillable. Fruit, 18 acres bearing apples, 20 acres bearing peaches,  $2\frac{1}{2}$  acres bear-

ing pears, 10 early bearing apples, with 1,350 peaches set between, and 600 plums just set, 75 cherry trees, 3 years old; 2 acres of grapes, 2 years old; 2 acres of quinces, 3 years old;  $\frac{1}{4}$  acre currants. Fences, wire and rail, good condition. Two-story frame house, 8 rooms, first class condition. Outbuildings: barn, basement, gambrel roof, 36x80, packing house 20x30, hog pen 16x24, tool shed 16x30, hen house 16x24, wagon shed 20x26, ice house 12x16, all nearly new. House watered by well, barn by well and cistern. Occupied by owner. Reason for selling, ill health of owner. Price \$30,000. Terms, \$15,000 down or \$28,500 all cash. Address L. C. Kruger, owner, Lockport, N. Y., or F. A. Ringueberg, agent, 16 Main street, Lockport, N. Y.

No. 706.—Farm of 50 acres; located 3 miles from Ewings P. O.;  $1\frac{1}{2}$  miles from turnpike, railway station, Lockport, on line of N. Y. C. R. R.; 1 mile from school;  $\frac{1}{2}$  mile from churches;  $1\frac{1}{2}$  miles from milk station. Highway, good. Reached by Lockport & Olcott trolley. General surface, level. Altitude, 375 feet. Nature of soil, sandy, gravelly loam. Acres in timber, 3; acres tillable, 47. Six acres of apple orchard, 180 trees. Baldwins, Kings, Greenings, 50 pear, 12 cherry, and 15 plum trees. Best adapted to apples, tomatoes, hay and grain. Fences, wire, in good condition. House, nearly new, 28x30, 2 stories and attic, 11 rooms. Outbuildings: barn 36x66, hot-house 20x60, capacity 400,000 plants, hothouse 29x59, both heated by steam. Large hen house, wagon house, granary and tool house. House watered by two wells, never failing. Occupied by owner. Price, \$10,000. Hothouse sales amount to \$1,500 yearly, hot water furnace in house, waterworks at barn. Fine peach land. Cars stop  $\frac{1}{4}$  mile from farm. Address Peter Shafer, owner, R. F. D., Newfane, N. Y.

No. 707.—Farm of 70 acres; located  $1\frac{1}{2}$  miles from Burt P. O. and railway station, on line of R. W. & O. and Rockport trolley;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches and milk station. Highways, state road. Nearest city, Lockport, population 17,970, 11 miles distant, reached by rail or highway. General surface, slightly rolling, sloping to south and east. Altitude, 300 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 35; in natural pasture,  $7\frac{1}{2}$ ; in timber, 6,

beech, maple and basswood. Acres tillable, 64. Fruit,  $8\frac{1}{2}$  acres of apples, 10 acres of peaches, 2 acres of pears, 1 acre of prunes, cherries and quinces. Best adapted to fruit and grain. Fences, wire and rail, good condition. House, 2 stories, 9 rooms, good condition. Outbuildings: barn 30x60, basement, hog house, poultry house and corn crib, good condition. House watered by well. Occupied by owner. Reason for selling, ill health. Price, \$13,000. Terms, \$4,000 cash, balance at 5%. Address W. Arndt, owner, R. F. D. No. 29, Burt, N. Y., or Arthur Bowen, broker, Hartland Road, Gasport, N. Y.

No. 708.— Farm of 80 acres, located  $\frac{1}{4}$  mile from Burt P. O. and railway station, on line of R., W. & O. R. R. and L. & O. trolley;  $\frac{1}{4}$  mile from school; 2 miles from churches;  $\frac{1}{4}$  mile from milk station. Highways, good. General surface nearly level, well drained. Altitude, 300 feet. Nature of soil, sandy and gravelly loam. Acres that can be used as meadow, 30, acres tillable, 80. Fruit, 520 apple trees, Greenings and Baldwins, 2,450 peach, 170 pear and 20 quince trees. Best adapted to peaches, grain, corn and potatoes. Fences, wire and rail, good condition. House,  $1\frac{1}{2}$  stories, 11 rooms, frame, in good condition. Outbuildings: barn 32x60, built in 1914, concrete floors, packing house 24x40, work shop and new poultry houses. House watered by well, fields, by spring. Eighteen mile creek adjoins on the west and Lake Ontario 2 miles north. Occupied by owner. Price, \$22,000. Terms, \$16,000 cash, balance on mortgage. Fruit is nearly all in full bearing and well cared for. Address John Zimmerman, owner, Burt, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

## TOWN OF PORTER

Population 2,655

No. 709.— Farm of 80 acres;  $2\frac{1}{2}$  miles from Ransomville P. O. and railway station, on R., W. & O. R. R. Soil, rich clay, loam. All tillable. Fruit, 600 apple and 300 pear trees; 300 peach trees set this spring, covering 5 acres. Soil adapted to general farming and fruit raising. Price, \$85 per acre. Terms on application. Name and address of owner, E. T. Ransom, owner, Ransomville, N. Y.

No. 710.— Farm of 60 acres, located 3 miles from Youngstown P. O., R. D.

No. 20, and trolley station on line Gorge Route trolley;  $3\frac{1}{2}$  miles from railway station at Ransomville and Model City on line of R., W. & O. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches;  $3\frac{1}{2}$  miles from butter factory and milk station. Highways, good. Nearest city Niagara Falls, population, 30,445, 10 miles distant, reached by rail or highway. General surface nearly level, good drainage. Altitude 325 feet. Nature of soil, very rich sandy loam. Acres that can be used as meadow, 45. Acres tillable, 60. Fruit, 220 apple, 400 peach, 200 pear, 120 quince, 30 plum and 25 prune trees, excellent condition. Best adapted to fruit, alfalfa, grain, potatoes and tomatoes. Fences, wire and rail, first class condition. House, 2 stories, 7 rooms, good condition. Barns 30x40 and 18x28, nearly new and well arranged. House watered by well, barns by well. Lake Ontario, 3 miles distant and Niagara river, 2 miles west. Reason for selling, other business. Price, \$7,600. Terms, \$4,500 cash, balance on mortgage at 6 per cent. Address Carl C. Kolloff, owner, R. D. No. 20, Youngstown, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

No. 711.— Farm of 107 acres, located 2 miles from Youngstown P. O., R. D. No. 20; 2 miles from Gorge Route trolley;  $3\frac{1}{2}$  miles from railway station at Lewiston, on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from churches;  $3\frac{1}{2}$  miles from butter factory and 2 miles from milk station. Highways, good. Nearest city, Niagara Falls, population 30,445, 10 miles distant, reached by Gorge Route trolley or highway. General surface, nearly level, good drainage. Altitude, 325 feet. Nature of soil, rich sandy and gravelly loam. Acres that can be used as meadow, 70; in natural pasture, 6; in timber, 2, oak and maple. Acres tillable, 105. Fruit, 10 acres of apples, winter varieties, 3 acres Bartlett pears, 3 acres of plums and 8 acres of peaches. Best adapted to fruit, grain, alfalfa, potatoes and cabbage. Fences, woven wire. House, 2 stories, 12 rooms, good cellar, good condition. Outbuildings: barn 40x80, full basement, good poultry house, tool house, hog house, all in first class condition. House watered by well and cistern, barns by wells, fields by small creek. Lake Ontario, 3 miles north. Niagara River, 2 miles west. Occupied by owner. Reason for selling, ill health and loss of eyesight. Price, \$16,050.

Terms, \$6,000 cash, balance on mortgage at 5%. Address G. W. Boreum, owner, R. D. No. 20, Youngstown, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

No. 712.—Farm of 96 acres;  $3\frac{1}{2}$  miles from Ransomville P. O., R. D. 24, and railway station on line of R., W. & O. R. R.;  $\frac{3}{4}$  mile from school;  $3\frac{1}{2}$  miles from churches and milk station. Highways, good. Nearest large village, Ransomville, population about 700. Surface, level. Soil, clay loam. Acres in timber, 8, beech, maple; acres tillable, 88. Fruit, 2 acres of pear, 14 acres of apple trees. Farm is on shore of Lake Ontario. House, 9 rooms, new. New barn. Watered by wells. Occupied by tenant. Reason for selling, owner non-resident. Price on application. Address T. E. Lockhart, owner, Troy, N. Y., or H. Sanford, agent, Wilson, N. Y.

#### TOWN OF ROYALTON

Population 4,956

No. 713.—Farm of 120 acres; located  $\frac{3}{4}$  mile from Gasport P. O. and railway station, on line of N. Y. C. R. R. and B. L. & R. trolley;  $\frac{3}{4}$  mile from school;  $\frac{3}{4}$  mile from churches;  $\frac{3}{4}$  mile from butter factory and milk station. Highways, good. Nearest city, Lockport, population 17,970, 7 miles distant, reached by rail or trolley. General surface, nearly level. Altitude, 500 feet. Nature of soil, gravelly loam, clay subsoil. Acres in meadow, 85; in natural pasture, 6. Acres tillable, 114. Fruit, 14 acres of apples, Baldwins, Greenings and Dutchess, 10 acres quinces, 8 acres pears, 4 acres plums and  $4\frac{1}{2}$  acres of grapes. Best adapted to fruit, grain, corn, potatoes and tomatoes. Fences, wire, fair condition. House, 2 stories, 10 rooms, large cellar, good verandas. Outbuildings: barns 36x50 and 28x40, corn crib, shop and tool shed. House watered by well, barns by well, fields by spring. Barge Canal,  $\frac{1}{2}$  mile distant. Occupied by tenant. Reason for selling, owner has other business. Price, \$17,500. Terms, \$7,000 cash, balance on mortgage at 5%. Address J. B. Pease, owner, Gasport, N. Y., or Arthur Bowen, broker, Hartland Road, Gasport, N. Y.

#### TOWN OF SOMERSET

Population 2,260

No. 714.—Farm of 12 acres; located 1 mile from Miller P. O. and railway

station, on line of R., W. & O. R. R.:  $\frac{1}{2}$  mile from school; 3 miles from church and 1 mile from milk station. Highways, good. Nearest city, Lockport, population 17,970, 15 miles distant, reached by rail or trolley. General surface, nearly level. Altitude, 340 feet. Nature of soil, rich sandy and gravelly loam. Acres in meadow, 3. Acres tillable, 12. Fruit, 120 apple trees in full bearing, 150 apple trees 2 to 4 years old. 300 peach, 100 pear and 30 prune trees. Best adapted to fruit, potatoes, cabbage, etc. Fences, hedge, in good condition. House, 2 stories, 7 rooms, needs some repairs. Barn 40x50, well painted. House watered by well, barns by well. Lake Ontario, 4 miles distant. Occupied by tenant. Reason for selling, other business. Price, \$2,850. Terms, \$1,000 cash, balance on mortgage. Address S. M. Hilliker, owner, 37 Chandler St., Buffalo, N. Y., or Arthur Bowen, broker, Hartland Road, Gasport, N. Y.

#### TOWN OF WILSON

Population 2,979

No. 715.—Farm of 38 $\frac{1}{2}$  acres; located 2 miles from Wilson P. O. and railway station at Wilson or Elberta, on line of R., W. & O. R. R.; 1 mile from school; 2 miles from churches and 2 miles from milk station. Highways, good. Nearest city, Lockport, population 17,970, 12 miles distant, reached by rail or highway. General surface, nearly level, sloping slightly to east. Altitude, 310 feet. Nature of soil, excellent fine sand loam. Acres that can be used as meadow, 6. Acres tillable, 38 $\frac{1}{2}$ . Fruit, 300 apple, 600 peach, 650 pear, 120 cherry, 20 plum and 10 prune trees. Best adapted to fruit. Fences, wire, good condition. House, 2 stories, 6 rooms, concrete cellar, good condition. Outbuildings: barn 20x40, poultry house 18x25, and tool house, need some repairs. House watered by well and cistern, barns by well. Lake Ontario, 2 miles north. Occupied by brother of owner. Reason for selling, desires a larger farm. Price, \$8,000 equipped. Terms, \$5,000 cash, balance on mortgage at 5%. Address C. MacGregor, owner, 690 Ellicott Sq., Buffalo, N. Y., or W. J. Strouse, broker, R. F. D. No. 39, Gasport, N. Y.

No. 716.—Farm of 75 acres; located 7 miles from Lockport P. O., R. D. No. 10; 5 miles from Wrights Station on L. & O. trolley; 6 miles from railway

station at Wilson on line of R., W. & O. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from church, and 6 miles from milk station. Highways, good. General surface, nearly level, gentle slope to north. Altitude, 350 feet. Nature of soil, sandy loam, clay subsoil. Acres that can be used as meadow, 65; in timber, 2, second growth. Acres tillable, 73. Fruit, 70 apple, 6 pear, 20 cherry and 6 plum trees, all bearing. Best adapted to hay, grain, fruit, potatoes and cabbage. Fences, wire, good condition. House, 2 stories, 11 rooms, concrete cellar, good condition. Outbuildings: barn 30x24, and 30x36, poultry house, hog house and wagon house. House watered by wells, barns by 2 wells. Occupied by tenant. Reason for selling, to settle an estate. Price, \$6,800. Terms, \$5,500 cash, balance on mortgage at 6%. Address W. E. Lewis, owner, R. D. No. 10, Lockport, N. Y., or W. J. Strouse, broker, R. D. No. 39, Gasport, N. Y.

No. 717.—Farm of 75 acres; located 2 miles from Warren's Corners; 5 miles from trolley station at Wrights; 6 miles from railway station at Wilson on N. Y. C. R. R.; railway opposite farm; 1 mile from school; 1 mile from churches. Highway, good. General surface, level. Altitude, 400 feet. Nature of soil, sandy and gravelly. Acres tillable, 73. In timber, 2; 3 acres orchard, 70 trees, Greenings, Baldwins, Kings, Spitz and Wealthy; 6 pear, 20 cherry, 6 plum, and 1 peach trees, 5 grape vines and 6 currant bushes. Fences, mostly wire, good condition. Outbuildings: barns 30x24, 30x36, hen house, hog house, wagon house and granary. House, 2 stories, 30x24, wing 15x20, 11 rooms, 2 verandas, new concrete cellar. House watered by 3 wells. Occupied by tenant. Reason for selling, to close an estate. Price, \$6,800. Terms, \$5,500 cash. Balance on mortgage at 6%. Address W. E. Lewis, owner, R. F. D. 10, Lockport, N. Y.

No. 718.—Farm of 57 acres; located 4 miles from Wilson P. O., R. D.; 2 miles from railway station at Burt, on

line of R., W. & O. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 2 miles from butter factory. Highways, good and level. Nearest city, Lockport, 12 miles distant, population 17,970, reached by highway or trolley. General surface of farm, level. Altitude, 300 feet. Nature of soil, gravelly loam and chestnut loam. Acres in pasture, 4; in timber, 3, hardwood, not extra. Acres tillable, 54. Fruit, 2,160 bearing peach, 250 apple bearing, 100 prune bearing, 200 cherry bearing, few pear trees; 30 trees 4 years old. Best adapted to fruit, gardening and grains. Fences only around pasture. House, 10 rooms, 38x42, new. Outbuildings: new horse barn 25x54; packing house 26x36; poultry house 12x18, corn crib and hog pen. House and barns watered by wells. Occupied by owner. Reason for selling, ill health. Price, \$19,000. Terms, \$5,000 cash, balance at 5%. Address W. J. Zimmerman, owner, Wilson, N. Y., or Hays Mercantile Agency, brokers, 42 Falls St., Niagara Falls, N. Y.

No. 719.—Farm of 42 $\frac{1}{2}$  acres; located 3 miles from Ransomville P. O., R. D. 24, and railway station on line of R., W. & O. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches; 3 miles from milk station. Nearest city, Niagara Falls, population 30,445, 13 miles distant, reached by rail and good level highway. Altitude, 340 feet. Nature of soil, clay loam. All tillable. Bearing fruit, 150 peach, 360 pear, 160 plum and prune, 150 quince and 80 cherry trees, 50 grape vines and 150 one-year-old trees. Best adapted to fruit and general farming. Fences, good wire and rail. House, 6 rooms, poor condition, needs painting and repairs. Barn 30x35, fair condition. House watered by well; barn, by well. Occupied by owner. Reason for selling, other business. Price, \$3,800. Terms, \$1,000 cash, balance at 5%. Address R. W. Ward, owner, R. D. 24, Ransomville, N. Y., or Hays Mercantile Agency, brokers, 42 Falls St., Niagara Falls, N. Y.

### ONEIDA COUNTY

Area, 1,196 square miles. Population, 154,157. Annual precipitation, 44 inches. Annual mean temperature, 47.9°. Number of farms, 6,929. County seat, Utica. This county is centrally located and is bounded on the southwest by Oneida Creek and Oneida Lake. It is drained by the Mohawk and Black Rivers and by Oriskany, Fish and West Canada Creeks. In the region around and extending east of Oneida Lake the surface is level. The hills of the northern part are formed in long, broad ridges, elevation from 200 to 600 feet. The soil in this section is a sandy and gravelly loam, very productive. In the low hills near the valley clay

loam is found, while on the higher elevations of the northeastern part gravelly loam predominates. Among the leading minerals of the county are gypsum, iron ore and hydraulic limestone. Oneida is one of the leading farm counties of the state, some of the principal crops being corn, 402,688 bushels; oats, 721,449 bushels; barley, 25,105 bushels; buckwheat, 54,411 bushels; potatoes, 1,192,575 bushels; hops, 1,804,878 pounds; hay and forage, 321,802 tons. The total value of farm property is \$38,437,991, an increase of 44.1 per cent. over the value of 1900. The average price of improved land throughout the county is \$42.81. The county reports 64,779 dairy cows; 16,652 horses; 13,661 swine; 6,510 sheep; 276,642 poultry. There are also reported about 35,000 head of cattle, exclusive of dairy cows. There were produced 35,045,439 gallons of milk and the total receipts from all dairy products was \$3,401,563. There are 169 milk stations distributed over the county. Oneida county is intersected by the Erie and Black River Canals and by the New York Central & Hudson River; Delaware, Lackawanna & Western; Rome, Watertown & Ogdensburg, and West Shore railroads, all of which center at Utica. The cities of Utica and Rome furnish ample markets; and New York City is a ready market for all export products. There are 358 district schools and at Clinton is located Hamilton College, a well-known institution of high character. There are 125 miles of state and county roads and 2,100 of improved highways; also 22 agricultural societies to assist the farmer with his work. The county ranks third in hops, third in the production of hay and forage and third in the production of milk.

## TOWN OF ANNSVILLE

Population 1,499

No. 720.—Farm of 120 acres; 8 miles from Camden P. O., R. D., and railway station, on line of N. Y. C. & H. R. R. R.;  $1\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from Methodist church;  $1\frac{1}{2}$  miles to cheese factory and 6 miles to sweet corn factory. Highways, fair. Nearest village, Camden, population 2,170, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, 900 feet. Soil, gravelly loam. Acres in meadow, 25; in natural pasture, 25; in timber, 70, hemlock, spruce, ash, beech, maple and birch. Acres tillable, 45. Fruit, 24 apple and 8 plum trees. Best adapted to potatoes, corn, oats and buckwheat. Fences, wire and stone, in fair condition. House, 22x28, needs some repairs, with wing, 16x16, unfinished, and woodshed, 16x18. Outbuildings: basement barn, 30x40; hog pen, 15x25; corn house, 12x20; hen house, 12x16, fair condition. Watered, house by springs, barns and fields by springs. This farm is 17 miles from Oneida Lake and 20 miles from Sylvan beach, a celebrated summer resort. Occupied by owner. Reason for selling, ill health. Price, \$3,500. Terms on application. Address M. L. Stanford, Camden, R. F. D. No. 5, N. Y.

No. 721.—Farm of 60 acres;  $2\frac{1}{2}$  miles from Point Rock P. O., R. D.; 10 miles from railway station at Blossvale on line of N. Y. C. & H. R. R. Loam soil. Acres in pasture, 20; in timber, 40. No buildings. Watered by spring brook.

New railroad being built: station will be 2 miles distant. Trout fishing. Price, \$200. Terms, cash. Address Silas W. Ferguson, owner, Worcester, N. Y., or Charles Worden, agent, Taberg, N. Y.

## TOWN OF BRIDGEWATER

Population 832

No. 722.—Farm of 236 acres; located  $2\frac{1}{2}$  miles from Bridgewater P. O. and railway station on line of D., L. & W. and U. & V. Rys.;  $\frac{1}{2}$  mile from school and cheese factory;  $2\frac{1}{2}$  miles from churches and milk station; 6 miles from milk condensing plant. Highways, somewhat hilly. Nearest large village, Waterville, 6 miles distant, population 1,410, reached by rail and highway. Surface of farm, rolling. Altitude, about 1,750 feet. Soil, clay and dark loam. Acres in meadow, 70; in natural pasture, 80; in timber, 17, beech, maple, hemlock, basswood and ash. Acres tillable, 200. Fruit, 50 grafted fruit trees. Best adapted to corn, oats, hops, potatoes, barley, beans, etc. Fences, barbed wire, good. House, 2 stories, upright and wing. Outbuildings: barn, 30x104, on a basement of wood and stone, fair condition. Watered, house by well, barn by running water in tub, fields by springs. Occupied by tenant. Reason for selling, ill health of owner. Price, \$3,000. Terms, \$1,000 down, balance on bond and mortgage. Address A. C. Sisson, owner, Brookfield, N. Y. Owner will rent.

## TOWN OF CAMDEN

Population 3,426

No. 723.—Farm of 290 acres;  $2\frac{1}{2}$  miles from Camden station, on line of R. W. & O. branch of N. Y. C. R. R.; also L. V. R. R.; 1 mile from state road as surveyed in 1911. Well adapted to dairying and fruit raising. Apple orchard, 100 trees. Large quantity of timber. One house, 10 rooms, in good condition. Numerous barns and outbuildings, sufficient for farm, in fair condition. Well watered and fairly fenced. This farm will keep 50 head of stock. Price, \$2,500. Terms easy. Address R. M. Rush, owner, Camden, N. Y.

## TOWN OF DEERFIELD

Population 1,660

No. 724.—Farm of 157 acres, 1 mile from North Gage;  $2\frac{1}{2}$  miles from Barneveld station, on line of N. Y. C. R. R., R. D. from Barneveld; 10 miles from Utica. Soil, clay loam, slate and limestone. Acres in meadow, 55; in pasture, 80; in timber, 20; 2 acres in orchard and yard. Medium-sized house, 32x25, 2 wings and woodshed, in first-class condition; 2 barns, 1, 90x40, concrete floor, watering basins; also silo, horse barn, 54x32, and outbuildings, in good repair. Watered by brooks, spring and 2 wells. Fences, post and wire, in good condition. A dairy of pure-bred and grade Holstein cows now on the farm will also be offered for sale, when the farm is sold. A macadamized county road leading north from Utica, N. Y., is near the farm. Reason for selling, advanced age of owner. Price, \$12,000. Terms, two-thirds cash, balance in 5 years, on mortgage. Liberal discount for cash. Address John K. Walker, owner, Holland Patent, N. Y.

No. 725.—Farm of  $87\frac{1}{2}$  acres, located 6 miles from Deerfield P. O., R. D. 2; 4 miles from railway station at Utica on line of N. Y. C. R. R.; 1 mile from school;  $3\frac{1}{2}$  miles from churches;  $\frac{1}{2}$  mile from butter factory;  $\frac{1}{2}$  mile from cheese factory; 5 miles from milk station. Highways, good dirt roads. General surface, rolling and level. Nature of soil, clay and loam. Acres in meadow, 37; in natural pasture, 40; in timber, 10, hard wood, some hemlock. Acres tillable, 77. Fruit, about 30 Northern Spies and other varieties of apples. Best adapted to hay, corn, oats and potatoes. Fences, wire and in good condition. House 30x24, first wing 24x16, 2nd 24x16, woodshed 18x18, all good. Outbuildings: barn 30x40,

good; cow stable 45x18, poor; horse barn 34x28, good; hog house 27x18, good. House watered by well, barns by well, fields by spring and stream. Occupied by tenant. Three years' lease, expires December 15, 1915. Reason for selling, to close estate. Price, \$3,500. Terms, cash. Address J. D. Crosby, Exc., Inwood, L. I., N. Y.

No. 726.—Farm of 150 acres, located  $1\frac{1}{2}$  miles from Deerfield P. O., R. D. 2;  $2\frac{1}{2}$  miles from railway station at Utica, on line of N. Y. C. R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from Catholic and Protestant churches. Highways, good but somewhat hilly. Surface of farm, level, rolling and hilly. Soil, gravel and sand. Acres in meadow, 50; in natural pasture, 35; in timber, 15, beech, birch and hemlock. Acres tillable, 50. Fruit, plums, apples, pears and grapes. Best adapted to potatoes, corn and garden truck. Fences, wire and post, good condition. House, large, 20x40, good condition. Outbuildings: barn, 60x40, basement; silo; barn, 35x32; horse barn, 18x30; shed, 15x18; chicken house; tool house and several small buildings. Watered, house, by well and cistern; barns and fields, by springs. Occupied by tenant. Reason for selling, owner a widow. For price and terms address Mrs. Geo. Crossman, owner, 31 Linwood Place, Utica, N. Y. Owner will rent.

## TOWN OF FLORENCE

Population 936

No. 727.—Farm of 85 acres, located 8 miles from Camden P. O., R. D. No. 4, and railway station on line of R. W. & O. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{2}$  mile from cheese factory and 8 miles from milk station. Highways, hilly. General surface of farm, rolling. Altitude, 700 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 25; in natural pasture, 40; in timber, 20, hard wood, mostly second growth. Acres tillable, 45. Fruit, 12 apple trees. Best adapted to corn, potatoes, oats and hay. Fences, stone and wire, good condition. Ten-room house and wood shed. Outbuildings: cow barn 26x50, good condition, horse barn 22x30, good condition. House watered by well, barns by stream, fields by stream. Occupied by owner. Reason for selling, old age. Price, \$2,800. Terms, \$2,000 cash, balance on mortgage. Price includes 5 cows, and farm tools. Address J. H. Stamford, owner, Camden, N. Y.

No. 728.—Farm of 329 acres, located 3 miles from Florence P. O.; 6 miles from railway station at Westdale on line of R. W. & O. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches;  $\frac{3}{4}$  mile from butter factory;  $\frac{3}{4}$  mile from cheese factory and 6 miles from milk station. Highways, fair. Nearest village Camden, population 2,170, 9 miles distant, reached by highway. General surface, rolling. Altitude, 1,100 feet. Nature of soil gravel and clay. Acres that can be used as meadow, 100; in natural pasture, 150; in timber, 79, hard wood. Acres tillable, 175. Fruit, 100 apple trees. Best adapted to hay, corn, oats and potatoes. Fences, mostly wire, fair condition. House 36x24, wing 20x30, fair condition. Outbuildings: barn 99x36, barn No. 2, 30x40, barn No. 3, 36x50, fair condition. House watered by well, barns, by stream and fields, by stream. Reason for selling, old age. Price, \$3,000. Terms, \$1,000 cash, balance on mortgage. Address James F. Flanagan, owner, 1122 Nelson street, Utica, N. Y. Owner will rent.

No. 729.—Farm of 250 acres, located 1 mile from Florence P. O., R. D. No. 1; 7 miles from railway station at Camden on line of R. W. & O. R. R.; 1 mile from school; 1 mile from churches and 1 mile from milk station. Highways, dirt road. General surface, rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, 50; in natural pasture, 150; in timber, 50, hard and soft wood. Acres tillable, 150. Fruit, apple trees. Best adapted to hay and grain. Fences, barbed wire. House, 20x28, kitchen 16x24. Barn 30x45, good. House watered by well, barn, by well and fields, by brook and springs. Occupied by tenant. Reason for selling, to settle an estate. Price \$2,500. Terms, one-half cash, balance on mortgage. Address, Joseph McFern, administrator, Camden, N. Y.

No. 730.—Farm of 206 acres, located 3 miles from Florence P. O. R. D. No. 1, and 8 miles from railway station on line of N. Y. C. R. R.; school on place; 3 miles from churches. Highways, good. Nearest village Camden, population 2,170, 8 miles distant, reached by highway. General surface, level. Altitude, 1,200 feet. Nature of soil, muck and clay. Acres that can be used as meadow, 50; in natural pasture, 116; in timber, 40; maple, spruce and hemlock. Acres tillable, 6. Fruit, 40 apple trees. Best

adapted to hay, oats, potatoes and corn. Fences, good. House, 8 rooms, woodshed, good condition. Basement barn 41x46 and one 30x40. House watered by well, barns by spring, fields by two streams. Occupied by owner. Reason for selling, old age. Price, \$1,800. Terms \$900 cash, balance on mortgage. Address Pierce Grace, owner, Florence, N. Y.

#### TOWN OF FORESTPORT

Population 1,100

No. 731.—Farm of 96 acres, located 1 mile from Forestport R. R. station and 3 miles from Alder Creek station on line of M. & M. R. R., and R., W. & O. R. R. Highways, good. Farm is 30 miles north of Utica, which has a population of 74,419. Occupied by tenant. Surface, level. Soil, sandy loam. Acres in pasture, about 80; timber, 16, small spruce, poplar, etc. Best adapted to potatoes, corn, oats, buckwheat and berries. Fences, wire. Gulf brook runs through farm, good fishing; dam could easily be constructed. Good hunting for deer and partridges in vicinity. Reason for selling, owner living elsewhere. Price, \$500. Terms, cash. Address S. N. Ferguson, owner, Worcester, N. Y., or Jas. G. Jones, agent, Forestport, N. Y. Owner will rent.

No. 732.—Farm of 44 acres; located 3 miles from Forestport P. O., R. D. 1. and railway station on line of M. & M. R. R.;  $\frac{1}{16}$  mile from school; 3 miles from Catholic and Protestant churches; 5 miles from cheese factory and milk station. Highways, good. Surface of farm, level. Altitude, 1,200 ft. Soil, gravel loam. Acres in meadow, 10; in natural pasture, 24; in timber, 10, second growth. Acres tillable, 34. Best adapted to oats, potatoes and hay. Fences, wire, fair condition. House 20x26, fair condition. Outbuildings, barn 30x40, fair condition. Watered by well and creek. Occupied by owner. Reason for selling, wants to go to city. Price, \$500. Terms, part cash, balance in yearly payments of \$50. Address John J. Quinn, owner, Forestport, N. Y., or James G. Jones, agent, Forestport, N. Y.

No. 733.—Farm of 200 acres, 3 miles from Forestport P. O., R. D.;  $\frac{1}{2}$  mile from Forestport railway station on line of M. & M. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from Methodist, Presbyterian, Episcopal and Catholic churches; 4 miles from cheese factory

and milk station. Highways, nearly level. Nearest village Forestport, population 507, 3 miles distant, reached by highway. Surface of farm, rough. Altitude, 1,100 feet. Soil, gravel loam. Acres in meadow, 50; in natural pasture, 75; in timber, 75, second growth. Best adapted to hay, oats, potatoes, etc. Fences, wire, good condition. House, 4 rooms, in good condition. Barn 40x50, hen house 10x12. Watered: house by well, barns by well, fields by creeks. This farm is 1 mile from Lindsey Lake. Occupied by owner. Reason for selling, owner not a farmer. Price, \$1,000. Terms part cash, balance \$50 per year. Nearly timber enough on this farm to pay for it. Address Elizabeth Quinn, owner, Forestport, N. Y., or James G. Jones, agent, Forestport, N. Y. Owner will rent.

No. 734.—Farm of 100 acres; located 2½ miles from Forestport P. O., R. D. 1, and railway station on line of M. & M. R. R.; ½ mile from school; ¾ miles from Catholic and Protestant churches; 5½ miles from milk station and cheese factory. Highways, good. Surface of farm, rolling. Altitude, 1,200 ft. Soil, gravel loam. Acres in meadow, 75; in natural pasture, 25; in timber, 5, second growth. Acres tillable, 75. Best adapted to oats, potatoes and hay. Fences, wire, good condition. House, 30x30 with wing 20x24, good condition. Outbuildings, barn 30x40, hen house and hog pen. Watered by well and spring. This farm is ½ mile from Lindsey Lake. Reason for selling, owner has other business. Price, \$1,200. Terms, part cash, balance in yearly payments of \$100. Address P. H. Powers, owner, Holland Patent, N. Y., or Jas. Jones, agent, Forestport, N. Y. Owner will rent.

No. 735.—Farm of 300 acres; 2 miles from Forestport P. O., R. D. 1; 1 mile from railway station at Forestport on line of M. & M. R. R.; ½ mile from school; 2 miles from Methodist, Presbyterian, Episcopal and Catholic churches; 4 miles from cheese factory and milk station. Highways, good. Nearest village, Forestport, population 507, 2 miles distant, reached by highway. Surface of farm, level. Soil, sandy loam. Acres in meadow, 50; in natural pasture, 150; in timber, 100, second growth. Acres tillable, 100. Best adapted to oats, potatoes, buckwheat, etc. Fences, wire, in good condition. House, 4 rooms, in good condition. Barn 40x40, hen house 16x20.

Watered: house by well, barns by well, fields by creek. Occupied by owner. Reason for selling, has other business. Price, \$3,000. Terms, \$1,000 cash, balance \$200 per year. Address W. H. Nelson, owner, Nichols, N. Y., or James G. Jones, agent, Forestport, N. Y.

No. 736.—Farm of 79 acres; located 2 miles from Forestport P. O., R. D. 1 and railway station on line of Mohawk & Malone R. R.; ¾ mile from school; 2 miles from churches; 4 miles from cheese factory; 5 miles from milk station. Highways, dirt and State roads. General surface of farm level. Acres in meadow, 52; in pasture and timber, 27. Best adapted to grain, potatoes and vegetables. Trout stream running through meadow. House, new, 8 rooms. Barn 27x75, repair shop and other outbuildings. Fences, wire. Young apple orchard. Occupied by tenant. Reason for selling, owner has home in Massachusetts. Address Katherine A. Kelly, owner, Forestport, N. Y., R. D. 1.

## TOWN OF LEE

Population 1,379

No. 737.—Farm of 140 acres; 1½ miles from post office; a new railroad close to farm, depot 1½ miles from farm; large new canning factory, 1½ miles from farm. Soil, gravel, good. Acres in meadow, 40; pasture, 40; timber, 20, 40 acres under plow. House, 10 rooms, in good repair. Large barn, 30x60; also horse barn. Two apple orchards, bearing. Watered by spring. Fences, woven wire. Price, \$3,500. Terms, \$2,000 down, balance on time. Address Wm. M. Kenyon, owner, Taberg, N. Y., R. D. 1. Owner will rent on shares.

No. 738.—Farm of 200 acres; located 2½ miles from Lee Center P. O., R. D., stage to Point Rock and Rome; 10 miles from railway station on line of N. Y. C. R. R.; ½ mile from school; 2½ to 4 miles from churches; 2½ miles from canning factory; ½ mile from cheese factory. Highways, good. General surface, slightly rolling. Altitude, 700 ft. Nature of soil, black muck and sandy, good. Acres in meadow and cropping, 75; in natural pasture, 125; in timber, none. All acres tillable. Fruit, apples, pears, grapes and plums. Best adapted to grass, hay, corn, oats and canning peas. Fences, barbed wire and stone wall. House, 13 rooms, in good condition. Outbuildings: barn No. 1, 45x70; No. 2, 30x50; horse barn, 30x46; hay house, 20x42, and other buildings, in

good condition. House watered by well in house, barns by running water in yard, fields by creek and never failing spring. Lake Delta 4 miles, Oneida Lake 12 miles and Fish creek 2 miles distant. Occupied by tenant. Term expires March 1st, of each year. Reason for selling, to close an estate. Price, \$6,000. Terms, cash preferred or would take mortgage for 50% of selling price. On line of Rome & Osceola R. R., now building, with station at Lee Center and prospects of milk station on farm. Stock and tools if desired. Address C. H. Zimmer, executor D. C., Constableville, Lewis Co., N. Y.

## TOWN OF MARCY

Population 1,301

No. 739.—Farm of 112½ acres; located 3 miles from Marcy P. O., R. D. 2, and railway station on line of Black River R. R.; ¾ mile from school; 1 mile from Protestant church; 4 miles from butter factory and milk condensing plant; 2½ miles from cheese factory; 3 miles from milk station. Highways somewhat hilly but good. Nearest city, Utica, 6 miles distant, population 74,419, reached by highway. Surface of farm, part hilly and part level. Good soil. Acres in meadow, 56; in natural pasture, 50; in timber, 6, beech, birch, maple, ash, elm and hemlock. Acres tillable, 56. Fruit, about 50 apple trees, also pears, plums, cherries, grapes and currants. Best adapted to hay, corn, oats, potatoes, etc. Fences, wire, fair condition. House, 8 rooms, old but in good condition, woodshed attached. Outbuildings: barn, 26x40; barn, 30x54, shed attached; store house, 18x24, with building, 20x24 annexed, in need of repairs. Watered, house, by wells; barns, by creek; fields, by creek and springs. Occupied by owner and tenant. Reason for selling, owner cannot attend to farm. Price, \$6,600. Terms, cash or part cash, balance on first mortgage. Address Mrs. Margaret J. Jones, owner, Marcy, N. Y., R. D. 2, care of B. F. Jones.

## TOWN OF MARSHALL

Population 1,744

No. 740.—Farm of 80 acres; located ½ mile from Deansboro P. O. and railway station on line of O. & W. R. R.; ½ mile from school; ½ mile from churches; ½ mile from milk station and condensing plant. Highways, state road. General surface, level. Acres in meadow, all. Fruit, 125 apple, 25 cherry trees

and other fruit. Best adapted to alfalfa, hops, etc. Fences, good. House, 12 rooms, running water, electric lights. Outbuildings: dairy barn 40x70, stanchions for 20 cows, hop house, corn house, milk house and horse barn. House watered by running water, barns, by running water and fields, by brook. Occupied by owner. Reason for selling, owner has 2 farms. Price, \$9,500. Terms, cash or ½ cash, balance on mortgage. Address W. J. Hinman, owner, Deansboro, N. Y., or W. E. Head Farm Agency, 114 Arcade Building, Utica, N. Y.

## TOWN OF PARIS

Population 2,659

No. 741.—Farm of 90 acres; located 2 miles from Chadwicks P. O. and railway station on line of D., L. & W. R. R.; 2 miles from school; 2 miles from churches and milk station. Highways, good. Nearest city, Utica, population 74,419, 5 miles distant, reached by rail and highway. General surface, mostly level. Nature of soil, gravel loam. Acres in pasture, 40; in timber, 10, all kinds. Fruit, 100 apple trees, plums, cherries and pear trees. Best adapted to general crops. Fences, wire, good condition. House, 8 rooms, good condition. Outbuildings: dairy barn 30x50, horse barn, poultry house, granary, silo, and other buildings. House watered by well, barns by running water, fields by creek. Occupied by owner. Reason for selling, old age. Price, \$8,000. Terms, ½ cash, balance on mortgage. Address Evin R. Pritchard, owner, New Hartford, N. Y., or W. E. Head Farm Agency, brokers, 114 Arcade Building, Utica, N. Y.

No. 742.—Farm of 200 acres; 10 rods from post office; 100 rods from railway station, on line of D., L. & W. R. R.; 20 rods from school; 15 rods from church; 1 mile from milk station; 8 miles from milk condensing plant. Highways, State road. Surface of farm, level and rolling. Altitude, about 1,200 feet. Soil, gravelly and sandy loam. Acres in meadow, 40; in natural pasture, 10; in timber, 1; acres tillable, 190. Fruit, 3 acres in apples. Best adapted to hops, potatoes, dairying, etc. Fences, wire, good. House, 2½ stories, 16 rooms, bath and toilet on 2 floors, laundry, running spring water, hot and cold water, all city improvements. Outbuildings, in perfect repair, capacity for 75 head of cattle. Watered by never-

failing springs. This farm is 100 rods from Sauquoit Creek. This property is 12 miles from city of Utica on State road. Three tenant houses. Large house was remodeled 5 years ago at cost of \$4,500. Occupied by owner. Reason for selling, failing health and advanced age of owner. Price, \$20,000. Terms,  $\frac{1}{2}$  cash. Address J. W. Risley, owner, Cassville, N. Y.

## TOWN OF STEUBEN

Population 785

No. 743.—Farm of 165 acres; located 6 miles from Remsen P. O., R. D. 3,  $2\frac{1}{2}$  miles from railway station at East Steuben, on line of N. Y. C. R. R.,  $\frac{1}{2}$  mile from school,  $\frac{3}{4}$  mile from Congregational church,  $1\frac{1}{2}$  miles from cheese factory,  $2\frac{1}{2}$  miles from milk station. Highways, good. Surface of farm, rolling. Altitude, 1,500 feet. Soil, loam. Acres in meadow, 70; in natural pasture, 75; in timber, 20, maple, large; acres tillable, 70. Best adapted to dairying, hay, grain and potatoes. Fences, wire and rail, good condition. House, 10 rooms, good condition. Outbuildings: 2 cow barns, 1, 40x60 and 1, 40x66; horse barn, 30x45; carriage house, 30x40. Watered by well, springs and creek. Occupied by tenant. Reason for selling, to close an estate. Price, \$3,000. Terms, easy. Address Mrs. E. W. Freeman, owner, 27 Dalton Ave., Pittsfield, Mass. Owner will rent.

## TOWN OF VERNON

Population 3,197

No. 744.—Farm of 260 acres; 2 miles from Vernon P. O. and railway station, on Oneida Electric R. R., with hourly service. Highways, good. Soil, gravel and loam. Acres in meadow, 185; tillable, 240; in natural pasture, 70; in timber, 5, maple and birch. Best adapted to corn, grain, hops and dairying. Altitude, 600 feet. Fences, post and wire. Large house, 4 rooms, bedroom and pantry on ground floor, 5 chambers, cellar and wood house, in good condition; also old dwelling which has been used as storehouse but which could be put in good condition at little expense. Basement barn, 100x40, with wing, 36x25, 2 silos attached; horse barn, 38x26; hop house, 45x20; hog house, 45x16. Watered, house and barns, by springs; fields, by running water. Reason for selling, owner wishes to retire. This farm is  $5\frac{1}{2}$  miles from Oneida, on the N. Y. C. R. R., and 4 miles from Kenwood, on the O. & W.

R. R., near canning factory, cheese factory and milk station. Price, \$45 per acre. Terms, one-third down. Address, F. A. Gary, owner, Vernon, N. Y. Owner will rent.

No. 745.—Farm of 141 acres; located  $1\frac{1}{4}$  miles from Vernon Center P. O.; 2 miles from railway station at Oriskany Falls on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{4}$  miles from churches; 4 miles from milk station. Highways, State road. Nearest city, Utica, population 74,419, 14 miles distant, reached by trolley and State road. General surface, level and slightly rolling. Nature of soil, gravel loam. Acres in natural pasture, 50; in timber, 20; acres tillable, 100. Fruit, 40 apple trees and other fruit. Best adapted to general crops, good alfalfa land. Fences, wire, in good condition. House, 12 rooms, in excellent condition. Outbuildings: dairy barn, 24x82, horse barn, poultry house, hog house, work shop, silo, etc. House watered by running water; barns, by running water, and fields, by brooks and springs. Occupied by tenant. Reason for selling, other business. Price, \$12,000. Terms, \$6,000 cash, balance on mortgage. Address H. W. Skinner, owner, Cor. Hart and Plant Sts., Utica, N. Y., or W. E. Head Farm Agency, 114 Arcade Building, Utica, N. Y.

No. 746.—Farm of 120 acres; located  $1\frac{1}{2}$  miles from Vernon Center P. O., R. D. 2, and railway station at Vernon on line of Oneida Trolley;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches; 1 mile from butter factory; 1 mile from cheese factory;  $1\frac{1}{2}$  miles from milk station and  $1\frac{1}{2}$  miles from Borden's bottling plant. Highways, mostly good dirt roads, some State road. Nearest city, Oneida, population 8,313,  $6\frac{1}{2}$  miles distant, reached by rail and highway. General surface, level. Altitude, 600 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 40; in natural pasture, 60; in timber, 20, hardwood; acres tillable, 100. Best adapted to alfalfa, grain and potatoes. Fences, barbed wire, fair condition. House, medium sized, good condition. Outbuildings: dairy barn, 30x70; underground stable. House watered by well and cistern; barns, by running water; fields, by creek. Occupied by tenant. Reason for selling, death in family. Price and terms on application. Address Laura C. Langford, owner, Vernon, N. Y.

No. 747.—Farm of 105 acres; located in the village of Vernon,  $\frac{1}{2}$  mile from railway station on line of Oneida Railway Trolley;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches; 1 mile from butter factory; 1 mile from cheese factory;  $\frac{1}{4}$  mile from milk station and condensing plant. Highways, good. Nearest city, Oneida, population 8,313,  $6\frac{1}{2}$  miles distant, reached by rail and highway. General surface of farm, level. Altitude, 600 feet. Nature of soil, clay and gravelly loam. Acres that can be used as meadow, 75; in natural pasture, 30; in timber, 3, hardwood, beech, maple, ash and elm; acres tillable, 90. Best adapted to alfalfa, peas, oats, corn and potatoes. Fences, mostly barbed wire, some woven wire, good condition. Three small houses in fair condition. Outbuildings: 3 barns with large shed and chicken house; large blacksmith shop; all in fair condition. House watered by well and cisterns; barns, by well and cistern; fields, by Sconondoa creek. Occupied by tenant. Reason for selling, other business. Price on application. Address David Barton Case, owner, Vernon, N. Y.

## TOWN OF VERONA

Population 3,456

No. 748.—Farm of 134 acres;  $3\frac{1}{2}$  miles from Verona station on lines of N. Y. C. and O. & W. R. Rs.; R. D. 2 from Durhamville; 10 rods from school; 1 mile from creamery;  $3\frac{1}{2}$  miles from milk station. Highways, in fair condition. Soil, sand and gravelly loam and muck. Acres in meadow, 50; tillable, 75; natural pasture, 52; timber, 2, maple and ash, second growth. Fruit, pears, plums and apples. Best adapted to grass, corn and oats. Occupied by owner. House, 2 stories, in good condition. Cow barn, 36x80, 20-foot posts, with 7-foot basement, pine siding, re-shingled in 1905 with Washington red cedar shingles; horse barn and wagon house, 36x50, pine siding, slate roof; hog house and hen house with basement, 20x30, 16-foot posts, 2 floors, used for storage; silo, 20x21x21; cow barn with basement above ground; 2 new hen houses; all floors in barns and hog house concrete. House built in 1882, well painted, tin roof, concrete cistern under kitchen, 10x10, and 8 feet deep; furnace heat. There is also on the place a shop or tool house, 20x30, 16-foot posts and pine siding; ice-house, wood and store house, 18x20, 14-foot posts and

pine siding. Farm will keep from 30 to 35 head of stock and 4 horses. Reason for selling, advanced age and poor health of owner. For price and terms, address Jerome A. Jackson, owner, Durhamville, N. Y.

No. 749.—Farm of 210 acres; located 4 miles from Verona P. O., R. D. 2; 1 mile from railway station at Greenway, on line of N. Y. C. R. R.,  $\frac{3}{4}$  mile from school, 3 miles from butter factory, cheese factory, milk condensing plant, Catholic and Protestant churches; 1 mile from milk station. Highways, State road except  $\frac{1}{2}$  mile. Nearest city, Rome, population 20,491, 3 miles distant, reached by highway. Surface of farm, just sloping enough for drainage. Altitude, 470 feet. Soil, Dunkirk gravelly loam. Acres in meadow, 100; in natural pasture, 70; in timber, 40, maple, elm, cedar, hemlock, etc.; acres tillable, 170. Fruit, apples, plums and currants. Best adapted to corn, wheat, oats, barley, peas, alfalfa, timothy and hay. Fences, mostly woven wire, with cedar posts, some barbed wire and cedar rails, first-class condition. House, 40x50, with wing, 20x40, brick, 16 rooms, first-class condition. Outbuildings: horse barn, 34x40, brick; barn, 40x70, with stone basement; barn, 20x45, with stone basement; 2 other large barns and tenant house, 8 rooms. Watered by well and running water. Occupied by owner and tenant. Reason for selling, advanced age of owner, who has other farms. For price and terms, address E. Emmons Coe, owner, Oneida, N. Y. Owner will rent.

No. 750.—Farm of 97 acres; located 1 mile from Verona P. O., and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches; 1 mile from cheese factory and 1 mile from milk station. Highways, good dirt roads, nearly level. Nearest city, Oneida, population 8,313, 4 miles distant, reached by rail or highway. General surface, nearly level. Nature of soil, gravel and clay loam, also some muck. Acres that can be used as meadow, 60, 2 acres alfalfa, 30 in natural pasture, 15 in timber; acres tillable, 60 or more. Fruit, apples, plums, cherries, about  $\frac{1}{4}$  acre of strawberries and some black raspberries. Best adapted to oats, corn, potatoes, etc. Fences, in fair condition. House, 9 rooms, concrete piazza, good condition. Outbuildings: barn, 28x60, with 16



FIG. 305.—BUILDINGS ON FARM NO. 749, TOWN OF VERONA, ONEIDA COUNTY



FIG. 306.—HOUSE ON FARM NO. 760, TOWN OF VERONA, ONEIDA COUNTY





stanchions; silo, 14x28, needs some repairs; new poultry house, 10x30; hog house, etc. House and barns watered by well; fields, by spring. Occupied by owner. Price, \$4,700. Terms, \$3,000 cash, balance on mortgage. Address Charles Zimmerman, owner, R. D., Verona Station, N. Y., or J. H. Fort, broker, Stone Building, Oneida, N. Y.

No. 751.— Farm of 273 acres; located 3 miles from Rome P. O., R. D.; 1 mile from railway station at Greenway on line of N. Y. C. & R. R.;  $\frac{1}{2}$  mile from school. Creamery on farm, butter made on farm. Three churches. Highways,  $\frac{1}{2}$  or more State road. General surface, level. Nature of soil, good and kept up. Acres in meadow, 75; in natural pasture, 123; in timber, 25; acres tillable, 50. Fruit, apple, pear and cherry trees. Best adapted to corn and hay. Fences, wire, in good condition. House, frame, 2 $\frac{1}{2}$  stories, 12 rooms, heated by steam, first class. Outbuildings, cow barn, 38x120, with basement, slate roof and concrete floor; horse barn, 36x50, concrete floor; hog house, 30x40, concrete floor; two hen houses. Fields watered by running stream; Oneida Lake within 10 miles. Buildings and contents insured for \$11,325. Occupied by owner. Reason for selling, wishes to retire. Price, \$25,000. Terms, \$15,000 cash at purchase; time, at 5%, on balance. Barn has 59 3-wing stanchions and box stall; silo. Immediate possession when sold. Address Franklin Stook. Owner, R. D. No. 2, Rome, N. Y., or I. B. Hibbard, agent, 209 N. Washington St., Rome, N. Y.

No. 752.— Farm of 153 acres; located 2 miles from Verona P. O., R. D. and railway station, on line of West Shore R. R.; 3 miles from Oneida, population 8,313;  $\frac{1}{2}$  mile from school and churches; 2 $\frac{1}{2}$  miles from cheese factory and milk station; 2 miles from condensing plant. General surface, level and rolling. Nature of soil, clay, loam, gravel and muck. Acres in meadow, 31; in pasture, 35; in timber, 15, beech, maple, elm and hemlock; acres tillable, 103. Fruit, 5 apple trees, Northern Spies. Best adapted to hay, alfalfa, beans, peas, corn, potatoes and oats. Fences, good. House, 1 $\frac{1}{2}$  stories, good condition. Outbuildings: 1 horse barn, 30x40; hay barn, 32x100; cow barn, 32x60, concrete floor, good condition. House and barns watered by pump, fields, by stream. Occupied by tenant. Reason for selling,

owner operates a canning factory and farm is too far away from factory to be profitable. Price, \$65 per acre. Terms, 60% mortgage, balance cash. Address The Burt Olney Canning Company, owner, Oneida, N. Y.

No. 753.— Farm of 180 acres; on road leading from Verona station to Vernon; 2 miles from either place; on the line of the proposed Buffalo, Rochester & Eastern Railway; 2 miles from 2 leading railroads, the N. Y. C. and W. S. & B.; 2 miles from canning factories and high school. Highways, good. Soil, sandy loam, clay subsoil. Acres in meadow, 60; acres tillable, 150; acres in timber, 20, maple, beech, elm and hemlock. Fruit, apples, pears, plums, prunes and cherries. Best adapted to general farming. Occupied by owner. Fences, wire, in good condition. House, modern, 14 rooms, slate roof; built in 1895. Dairy barn, 120x40, 54 feet high, slate roof, built in 1895. Horse barn, 50x34, slate roof, built in 1895; hog house, 60x16, steel roof, built in 1900. Maple grove, with sugar house, in good condition. Water, gravity system in barn yard; never-failing well and large cistern in house. This is one of the most desirable farms in the county, as to location, surroundings and general advantages. Reason for selling, advanced age of owner. Price, \$15,000. Terms, \$8,000 cash, balance can remain on bond and mortgage. Name and address of owner, I. L. Amann, Verona, N. Y., R. D. 2.

No. 754.— Farm of 150 acres;  $\frac{1}{4}$  mile from State Bridge P. O.; 40 rods from station on line of O. & W. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from church; 40 rods from milk station. Highways, good; 4 miles from Oneida, population, 8,313, reached by rail and highway. Occupied by owner. Surface, part rolling and part level. Soil, gravel and sand loam; 6 acres in timber, 140 acres tillable. Best adapted to corn, small grains, hay and potatoes. Fences, barbed wire, in good condition. House, 2 stories, upright, 18x26; wing, 16x24, 1 $\frac{1}{2}$  stories. Barn, 30x70, hemlock; barn, 26x25. Watered by well and running water; 4 miles from Oneida Lake. Price, \$5,000. Terms, one-third down. Address Ael Wilcox, owner, Verona Station, N. Y.

No. 755.— Farm of 250 acres; 2 miles from Verona Station P. O.; 2 miles from railway station on line of N. Y. C. & H. R. R. R.; 1 mile from school; 3 miles from churches; R. D. 1 from Verona sta-

tion. Highways, good; 3 miles from Oneida, population, 8,313, reached by highway. Occupied by owner. Level surface. Soil, muck, sandy loam with clay subsoil. Acres in meadow, 90; pasture, 100; acres tillable, 225. Fruit, apples. Best adapted to hay, grain and dairying. Fences, barbed wire, in good condition. House,  $1\frac{1}{2}$  stories. Barns for stabling 30 cows and 15 horses and capable of holding enough feed for them. Watered by well and windmill; 6 miles from Oneida Lake. Price, \$15,000. Terms, one-third down. Address Asel Wilcox, owner, Verona Station, N. Y.

No. 756.—Farm of 128 acres; located 2 miles from Verona P. O. and railway station, on line of West Shore R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches and 2 miles from milk station. Highways, good country road. Nearest city, Oneida, population 8,313, 3 miles distant. General surface, rolling. Nature of soil, gravel loam, clay loam and some sandy loam. In timber, 8, hard maple, beech, white ash; acres tillable, 120. Fruit, 20 apple, 15 pear, 15 cherry trees, grapes in abundance and 30 young apple trees. Best adapted to oats, wheat, corn, grass, peas, etc. Fences, good. Ten-room house, good condition. Outbuildings, main barn, 30x92; horse barn, 20x65; shop, corn house, poultry house, hog pen and silo 14x18. House watered by well; barns, by running water; and fields, by running water. Occupied by owner. Reason for selling, wishes to retire. Price, \$9,600. Terms, half cash, balance on mortgage. Address John Esch, owner, R. D., Oneida, N. Y., or J. H. Fort, broker, Oneida, N. Y.

No. 757.—Farm of 16 acres; located  $\frac{1}{4}$  mile from Durhamville P. O.;  $\frac{1}{2}$  mile from railway station on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches and  $\frac{1}{2}$  mile from milk station. Highways, good, level, about to be made State road. Nearest city, Oneida, population 8,313, 2 miles distant, reached by rail and highway, also auto bus service. General surface, rolling. Nature of soil, sandy loam. Acres in natural pasture, 3. Acres tillable, 12 or 13. Fruit, 13 bearing apple trees, 1 pear, 25 plum, 3 cherry, 3 grape vines and 40 to 50 young trees. Best adapted to potatoes, corn, berries, vegetables, fruit, etc. Fences, good. House, 10 rooms, very good. Outbuildings, barn, 26x36, nearly new and corn house. House and barns watered by well; fields,

by creek near barn. Occupied by owner. Reason for selling, wishes to retire. Price, \$2,750. Terms, \$1,500 cash. Address Mrs. John Bartel, Owner, Durhamville, N. Y., or J. H. Fort, Broker, Oneida, N. Y.

No. 758.—Farm of 197 acres; located 2 miles from Durhamville P. O., R. D. 2;  $\frac{1}{2}$  mile from railway station at State Bridge, on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{3}{4}$  mile from churches; 1 mile from cheese factory;  $\frac{1}{2}$  mile from milk station. Highways, level and good. Nearest village, Oneida, on N. Y. C. R. R., population about 8,317, 4 miles distant, reached by rail and highway. Surface, rolling. Acres in meadow, 40; in natural pasture, 60; in timber, 35 or 40, hemlock, soft maple, elm, birch and cedar; acres tillable, 60. 1 young and 1 old apple orchard. A few cherries, pears and grapes. Best adapted to corn, potatoes, grain, etc. Fences, wire, in good condition. Two houses, 1, 12 rooms; 1, 7 rooms. Horse barn, 40x60, good condition; cow barn, 30x50, with addition on side and end, suitable for 25 head of stock; new silo. Watered, house and barns, by wells; fields, by brook. Oneida Lake, 3 miles distant. About 400 feet from Erie Canal. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$6,300. Terms, one-half down, balance at 5%. Address Mrs. Clara Hess Munroe, owner, 44 Stone St., Oneida, N. Y.

No. 759.—Farm of 239 acres; 5 miles from Durhamville P. O., R. D. 1;  $2\frac{1}{2}$  miles from railway station at State Bridge on line of N. Y., O. & W. R. R.;  $2\frac{1}{2}$  miles from railway station at Sylvan Beach on line of L. V. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from church; 1 mile from cheese factory;  $2\frac{1}{2}$  miles from milk station. Highways, level. Nearest city, Oneida, population, 8,313, 7 miles distant, reached by rail and highway. Surface of farm, level and rolling. Soil, sandy loam and clay. Acres in meadow, 100; in natural pasture, 150; in timber, 50, maple, elm and ash; acres tillable, 150. Fruit, apples, cherries and plums. Best adapted to grass, corn, oats and buckwheat. Fences, woven wire, barbed wire and rail, good condition. House, 8 rooms, fair condition. Outbuildings, 1 barn, 36x60; barn, 40x60, with basement; barn, 20x70; corn house; hog house; hen house and silo, 16x24, good condition. Watered by well and creek. This property is  $2\frac{1}{2}$  miles

from Sylvan Beach. Occupied by owner. Reason for selling, owner has another farm and cannot attend to both. Price, \$8,000. Address Edgar S. Bennett, owner, Durhamville, N. Y. Owner will rent.

No. 760.—Farm of 70 acres; 3 miles from Durhamville P. O., R. D.;  $\frac{1}{2}$  mile from railway station at State Bridge, on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from Methodist church; 2 miles from butter factory;  $\frac{1}{2}$  mile from cheese factory; 1 mile from milk station. Highways, good. Nearest city, Oneida, population 8,313,  $4\frac{1}{2}$  miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 400 feet. Soil, black loam and muck. Acres in pasture, 27; in timber, 2; maple, second growth. Acres tillable, 68. Fruit, apples, plums, cherries and grapes. Best adapted to hay and grain. Fences, wire, in good condition. House, 15 rooms, in fine condition. Outbuildings, 3 good barns, hen house, granary, and hog house. Watered, house and barns, by well; fields, by brook. This farm is 3 miles from Oneida Lake. Occupied by owner. Reason for selling, ill health. For price and terms, address William D. Miller, owner, Durhamville, N. Y., R. D. 1. Owner will rent with option to buy.

## TOWN OF VIENNA

Population 1,904

No. 761.—Farm of 115 acres; located 2 miles from North Bay P. O., R. D. 2 and railway station on line of N. Y., O. & W. R. R.; 2 miles from school and churches; 2 miles from butter and cheese factories. Highways, good. Nature of soil, gravel and sandy. Acres in meadow, 40; in pasture, 40; acres tillable, 45. Best adapted to oats, wheat, potatoes and berries. Fences, good. House, 12 rooms. Barn has 16 cow stanchions and 4 horse stalls. House watered by well; barn, by spring; fields, by springs. Occupied by tenant. Possession in 30 days. Reason for selling, owner a railroad man. Price, \$2,500. Terms, cash. Address Frank O'Connor, owner, Cleveland, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

No. 762.—Farm of 65 acres; located 1 mile from West Vienna P. O., R. D. 7 and railway station on line of O. & W. R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory.

Highway, level and good. General surface, level. Nature of soil, gravel loam. Acres in meadow, 20; in pasture, 20; in timber, 15, maple, hemlock and pine. Fruit, 75 young apple trees. Best adapted to corn, potatoes, wheat, rye and oats. Fences, good. House, 4 living rooms, 5 sleeping rooms. Barns with stanchions for 8 cows and 4 horse stalls; hen house and wagon shed. House and barn watered by well; fields, by springs. Reason for selling, owner living in New York. Price, \$3,000. Terms, \$2,000 down, balance \$100 per year. Address Edward Delahunt, owner, Cleveland, N. Y., or Bernard Delahunt, Agent, Cleveland, N. Y.

No. 763.—Farm of 52 acres; located 1 mile from North Bay P. O., R. D. 2 and railway station on line of N. Y., O. & W. R. R.; 1 mile from school and churches; 1 mile from milk station. Nearest city, Oneida, population 8,313, 10 miles distant, reached by rail or highway. General surface, level. Nature of soil, gravel loam. Acres in meadow, 25; in pasture, 26; in timber, 1. Fruit, old apple trees. Best adapted to corn, potatoes, oats, wheat and rye. Fences, good. House, 11 rooms. Barn, 20x40, good condition; tool house and hen house. House watered by well. Near Oneida Lake. Occupied by owner. Reason for selling, owner a widow. Price, \$2,100. Terms, half down. Address Mrs. McDewitt, owner, North Bay, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

No. 764.—Farm of 51 acres; located  $\frac{1}{2}$  mile from North Bay P. O., R. D. 2 and railway station on line of N. Y., O. & W. R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory; 1 mile to milk station. Highway, good. General surface, level. Nature of soil, gravelly loam. Acres in meadow, 20; in pasture, 15; acres tillable, 45. Fruit, apples for family use. Best adapted to oats, potatoes, rye, buckwheat and corn. Fences, good. House, 8 sleeping rooms, 6 living rooms, good condition. Outbuildings, 2 large barns with 4 horse stalls and 10 cow stanchions; large wagon shed, very good tool house, hen house and smoke house. House watered by spring and two wells. Occupied by owner. Reason for selling, owner a teacher. Price, \$2,000. Terms, \$1,500 down, balance to suit purchaser. Ad-

dress Wm. Gallagher, owner, Cleveland, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

No. 765.—Farm of 112 acres; located 2 miles from North Bay P. O., R. D. 2 and railway station on line of N. Y., O. & W. R. R.; 2 miles from school and churches;  $\frac{1}{2}$  mile to Catholic church; 2 miles from butter and cheese factory. Highway, good. General surface, level. Nature of soil, gravel loam and muck. Acres in meadow, 20; in pasture, 40; in timber, 12; tillable, 40. Fruit, apples for family use. Best adapted to oats, corn, potatoes and rye. Fences, good. House, 7 rooms. Two good barns. House and barns watered by well, fields, by stream; near Oneida Lake. Occupied by owner. Reason for selling, owner a widow. Price, \$2,500. Terms, cash. Address Mrs. Weehan, owner, North Bay, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

No. 766.—Farm of 100 acres; located 1 mile from West Vienna P. O., R. D. 1 and 2 miles from Jewell on line of N. Y., O. & W. R. R.; 2 miles from school and churches; 2 miles from butter and cheese factory. Nature of highway, level, good. General surface of farm, level. Nature of soil, clay loam. Acres in meadow, 4; in pasture, 40; acres tillable, 60. Best adapted to oats, potatoes, corn, rye and wheat. Fences, good. House, fine, 12 rooms. Barn with stanchions for 18 cows and stalls for 4 horses; hog house; hen house. House watered by well, barns, by well, fields, by springs. Farm is on Oneida Lake. Fences, good. Occupied by tenant. Will sell or rent. Reason for selling, owner is in other business. Price, \$4,500. Terms, \$2,500 cash, balance, \$100 per year. Address John Delahunt, owner, Cleveland, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

#### TOWN OF WESTMORELAND

Population 1,995

No. 767.—Farm of 70 acres; located 1 mile from Hecla P. O.; 1 mile from railway station on line of W. S. R. R.; 1 mile from school; 4 miles from churches and 1 mile from milk station. Highways,

good country roads. Nearest village, Verona, 4 miles distant, reached by rail or highway. General surface, nearly level. Nature of soil, clay loam. Acres that can be used as meadow, probably 50; in natural pasture, about 10; in timber, 2; acres tillable, 50. Fruit, 60 bearing apple trees, 10 pear, 10 plum, 4 or 5 cherry trees, some grapes. Fine asparagus bed. Best adapted to oats, wheat, corn, alfalfa, etc. Fences, nearly all new woven wire. Twelve-room house, bath and toilet. Arranged for one or two families. Complete set of up-to-date barns with concrete floors, swing stanchions, auto room, silo, milk house, etc. House watered by well, barns and fields, by stream. Hecla Lake is on the rear line of the farm. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$8,500, includes all stock, tools, crops, etc. Terms, \$4,500 cash, balance on mortgage. Stock consists of 10 cows, 3 horses, complete outfit of implements. Not over ten minutes' walk to trolley station on road from Utica to Syracuse. Address Fred B. Griffith, owner, R. D., Verona, N. Y., or J. H. Fort, broker, Oneida, N. Y.

No. 768.—Farm of 40 acres; located 1 mile from Lowell P. O.; 2 miles from railway station at Greenway on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches and 1 mile from milk station. Highways, good, level country road. Nearest city, Rome, population 20,497, 5 miles distant, reached by rail or highway. General surface, slightly rolling. Nature of soil, clay loam. Acres that can be used as meadow, about-all; acres tillable, all. Best adapted to peas, corn, potatoes, hay, wheat, oats, etc. Fences, good. Eight-room house, in good condition. Outbuildings: barn 26x36, good condition, several other buildings, all good except an old house used for a shop. House watered by well, barns by creek through yard, fields by spring. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$3,000. Terms, \$1,000 cash, balance on mortgage. Address Addison G. Smith, owner, R. D., Rome, N. Y., or J. H. Fort, broker, Stone Building, Oneida, N. Y.

#### ONONDAGA COUNTY

Area, 824 square miles. Population, 200,298. Annual precipitation, 46.66 inches. Annual mean temperature, 48.9°. Number of farms, 5,770. County seat, Syracuse.

This county is located in the central part of the state, its northern shores are bounded by Oneida Lake. Lake Skaneateles forms the southwest boundary. It is excellently drained by the Seneca River and Chittenango and Onondaga Creeks.

Its surface features are greatly undulated in the northern part. In the extreme southern part the surface is generally rough and hills extend in long ridges north and south with narrow valleys between. There is a general slope toward the center of the county into the flats of the "great level." In the southern portion we find a clay and dark sandy loam, in the valleys clay loam, in the central and northern portion a rich sandy and gravelly loam. Among the minerals found in this county are salt, iron ore, limestone and gypsum; the Onondaga limestone being an excellent building stone. Salt is obtained from salt wells in the vicinity of Syracuse. The value of the exported product has at times exceeded a million dollars annually. The county is adapted to general farming, the leading products being corn, 707,385 bushels; oats, 1,127,012 bushels; wheat, 173,499 bushels; barley, 166,274 bushels; buckwheat, 82,839 bushels; potatoes, 1,671,835 bushels; hay and forage, 215,058 tons. Like many other counties of the state alfalfa can be grown with great success. The total value of farm property is \$37,291,043, an increase of 17.5 per cent. in the past ten years. The average price of improved lands is \$67.58 per acre.

Domestic animals reported as follows: Dairy cows, 36,331; horses, 17,128; swine, 21,453; sheep, 17,284; poultry, 302,764; production of milk was 21,035,070 gallons, which with the products of 55 milk stations and factories sold for \$2,063,923. Numerous transportation lines intersect the county. Syracuse, with a population of 137,244, is a large manufacturing center and is the home of Syracuse University. There are 255 district schools well located throughout the county and 29 agricultural societies. The county has 90 miles of state and county roads and 927 miles of other improved highways. Onondaga is one of the progressive counties of the state.

## TOWN OF CAMILLUS

Population 2,642

No. 769.—Farm of 160 acres; located 1 mile from Camillus P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 mile from school and churches; 1 mile to butter factory and milk station. Highway, good. Nearest city, Syracuse, population 137,249, 7 miles distant, reached by rail or highway. Altitude, 600 feet. Nature of soil, gravel, clay and lime loam. Acres in timber, 4, second growth; acres tillable, 156. Fruit, various kinds, 3 acres. Best adapted to general farm crops and alfalfa. Fences, good. House, fair, with bath and improvements. Outbuildings: basement barn, 40 stanchions; ice house and several other outbuildings. Running water to house and barns. Fields watered by spring and streams; near Cross Lake and Onondaga Lake. Reason for selling, desires to retire. Price, \$13,500. Terms, \$3,000 cash, balance 5% mortgage. Address Chas. Wilson, owner, 329 Kirk Block, Syracuse, N. Y., or Charles S. Hutchinson, agent, 107 West Kennedy St., Syracuse, N. Y.

## TOWN OF ELBRIDGE

Population 2,980

No. 770.—Farm of 200 acres; located 2 miles from Elbridge P. O., R. D.; 1 mile from railway station at Halfway on line of N. Y. C. R. R.; 12 miles from Syracuse, population 137,243, ½ mile from school; 2 miles from churches; 2

miles from butter factory. Highways, fine State road within ¼ mile. General surface, rolling. Altitude, 700 feet. Nature of soil, gravel loam; 65 acres alfalfa. Acres in meadow, 20; in natural pasture, 20; all tillable. Fruit, 100 apple trees. Best adapted to alfalfa, grain, cabbage, potatoes and fruit. Fences, wire, good condition. House, excellent, 12 rooms, bath, hot and cold water, etc. Eight-room tenant house. Outbuildings: basement barn, 12x40; 2 other large barns, wagon shed, tool house, etc. House watered by running water, barn by spring; Seneca River 2½ miles distant. Occupied by owner. Reason for selling, ill health. Price, \$20,000. Terms, \$10,000 down, balance 5%. Address G. S. Baggett, owner, Memphis, N. Y., or Geo. Goodelle, Inc., 203 East Fayette St., Syracuse, N. Y.

No. 771.—Farm of 165 acres; located 1 mile from Elbridge P. O., R. D. No. 2; 1½ miles from railway station at Halfway on line of Auburn branch of the N. Y. C. R. R.; 1 mile from school; 1 mile from churches; ¾ mile from butter factory and milk station. Highways, State road. General surface, rolling. Nature of soil, fine clay loam, limestone. Acres that can be used as meadow, 150; in natural pasture, 5; timber enough for firewood; acres tillable, 150. Fruit, apples, pears, plums, grapes, etc. Best adapted to alfalfa, grain, corn, etc. Fences, woven wire, good condition. House, large brick mansion, fire places,

verandas, etc. Outbuildings: basement barn 80x40; other small buildings, other barns and tenant house. House watered by springs, barns by springs, fields by springs. Occupied by owner. Reason for selling, to close an estate. Price, \$16,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Myra B. Rice, owner, Elbridge, N. Y., or McLaughlin & Mawhiney, brokers, 407 Gurney Building, Syracuse, N. Y.

No. 772.—Farm of 103 acres; located on border of village of Elbridge, population 462,  $1\frac{3}{4}$  miles from railway station at Skaneateles Junction, on line of Auburn branch of N. Y. C. R. R.; short distance to school and churches;  $1\frac{3}{4}$  miles from butter factory and  $1\frac{3}{4}$  miles from milk station. Highways, State road. Nearest large village Jordan, population 978, 2 miles distant, reached by State road. General surface of farm, nearly level. Nature of soil, black loam, limestone. Acres that can be used as meadow, 90; in natural pasture, 5; in timber, 3, maple; acres tillable, 90. Fruit, 100 apple trees and all kinds of small fruit. Best adapted to alfalfa, potatoes, wheat, corn, etc. Fences, wire, fair condition. Houses, 2, in fair condition. Basement barn, needs some repairs. House watered by springs and well, barns by springs and fields by springs. Occupied by tenant. Price, \$7,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. This is a good alfalfa farm. Address John Calhoun, owner, Elbridge, N. Y., or McLaughlin & Mawhiney, brokers, 407 Gurney Building, Syracuse, N. Y.

No. 773.—Farm of 160 acres; located  $3\frac{1}{2}$  miles from Camillus P. O., R. F. D.; 2 miles from railway station at Halfway Station on line of N. Y. C. & H. R. R. R.;  $1\frac{1}{2}$  miles from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{4}$  mile from butter factory;  $\frac{1}{4}$  mile from creamery. Highway, State road. General surface, little rolling, but generally level. Under high state of cultivation. Altitude, 500 feet. Nature of soil, lime loam and alfalfa soil. Acres in meadow, 70; 10 acres of alfalfa included in the meadow; 25 acres in pasture; 8 in timber, hard and soft timber of various kinds; cedar lot for posts; acres tillable, 145. Fruit, 5 acres of various kinds, all in good condition and bearing. Best adapted to wheat, corn, oats, barley, hay, fruit and alfalfa; all alfalfa soil. Fences, wire and post, in good condition. House, 15 rooms, good condition, with bathroom

and newly decorated; 3 cellars; large wood shed attached. Outbuildings: barn, 40x112 and basement for 50 cows; corn, horse and carriage barn with basement and other buildings, all in good condition. House watered by running water, cold and hot. Barns, running water. Windmill for house and barns; Skaneateles Lake 5 miles and Otisco Lake, 6 miles distant. Occupied by tenant. Reason for selling, to settle an estate. Price, \$16,500. Terms, reasonable payment down, balance to suit the purchaser at 5%. Farm a little elevated, but surface generally level and commanding a beautiful view and house surrounded with fine shade trees. Address Perry Morgan, owner, 241 Furman St., Syracuse, N. Y., or Chas. S. Hutchinson, agent, 107 West Kennedy St., Syracuse, N. Y.

#### TOWN OF LYSANDEE

Population 4,509

No. 774.—Farm of 170 acres; located 5 miles from Memphis P. O., R. D. No. 1; 5 miles from railway station, on lines of N. Y. C. and W. S. R. R.; 1 mile from Rochester and Syracuse trolley; 5 miles from churches;  $\frac{3}{4}$  mile from butter factory and milk station. Highways, good. Nearest village, Jordan, population 978, 14 miles distant, reached by trolley. Nature of soil, clay loam. Acres that can be used as meadow, 150; in timber, 20, virgin timber, basswood, maple, chestnut, elm and hickory. Fruit, apple orchard of about 100 trees, pears, plums, etc. Best adapted to grain, alfalfa and corn. Fences, woven wire and wood, good condition. House, 12 rooms, in first class condition. Outbuildings: barn 80x36, good condition, shed 30x90, corn house 20x40, hog house and wagon house. House watered by well, barns by springs, fields by springs. Borders on Seneca River (new Barge Canal). Occupied by owner. Reason for selling, old age. Price, \$12,000. Terms, \$6,000 cash, balance on mortgage. Timber is estimated to be worth \$6,000, can be shipped by way of new canal. Address Emerson Gates, owner, Memphis, R. F. D., N. Y., or McLaughlin & Mawhiney, brokers, 407 Gurney Building, Syracuse, N. Y.

#### TOWN OF MANLIUS

Population 6,016

No. 775.—Farm of 18 acres; located  $1\frac{1}{2}$  miles east from Fayetteville. All alfalfa land. Good house. Fair barn. Some fruit. One-eighth mile to school.

on town road;  $\frac{3}{4}$  mile to State road. Price, \$3,000. Address F. E. Dawley, owner, Fayetteville, N. Y.

## TOWN OF ONONDAGA

Population 6,340

No. 776.—Farm of 183 acres; 3 miles from Onondaga P. O., R. D. 2; 7 miles from Syracuse, on lines of N. Y. C. and D., L. & W. R. Rs.;  $\frac{1}{2}$  mile from school; 3 miles from Methodist and Presbyterian churches;  $1\frac{1}{2}$  miles from butter factory. Highways, stone and macadamized. Nearest village, Onondaga, population 400, 3 miles distant; nearest city, Syracuse, population, 137,249, 7 miles distant. Surface of farm, rolling. Altitude, 1,200 feet. Soil, sandy loam. Acres in meadow, 120; in timber, 13; all tillable except woodland. Fruit, 224 choice apple trees. Best adapted to alfalfa, oats, barley, wheat. Fences, woven wire. House, 12 rooms, in good condition. Barn, 30x26, on basement; barn, 26x60; barn, 30x40; barn, 40x45; cow house, pig pen, hen house. Watered, house by well, barns by running water, fields by spring. Fifty acres of fine alfalfa. This is good land and milk from this farm sells for 4 cents per quart. Occupied by tenant. Reason for selling, owner is not a farmer. Price, \$11,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address D. L. Curtis and E. P. Boyle, owners, Onondaga, N. Y.

No. 777.—Farm of 80 acres; located 6 miles from Syracuse P. O., R. D.; trolley stop on farm on line of Auburn & Syracuse R. R.; 1 mile from school and churches;  $1\frac{1}{2}$  miles from butter factory, cheese factory and milk station. Highway, State road. General surface, level. Altitude, 600 feet. Nature of soil, lime loam; 30 acres in meadow; in pasture, 15; in timber, 2, grove, oak and elm; acres tillable, 70. Fruit, 3 acres, all kinds. Best adapted to general farm crops and alfalfa. Fences, wire and rail. House, 12 rooms, newly painted, good condition. Outbuildings: 2 barns, 40x70 and 30x40; tool house; ice house; hog and poultry house and other small buildings, all in good condition. House and barn watered by well, fields by spring. Occupied by tenant. Reason for selling, to close an estate. Price, \$9,000. Terms, \$2,000 down, balance 5% mortgage. Address Perry Morgan, owner, 241 Furman St., Syracuse, N. Y., or Chas. S. Hutchinson, agent, 107 West Kennedy St., Syracuse, N. Y.

No. 778.—Farm of 30 acres; located 4 miles from Syracuse P. O., R. D. 3; 6 miles from railway station at Syracuse, on line of several railways;  $\frac{1}{4}$  mile from school; 2 miles from Catholic and Protestant churches;  $\frac{3}{4}$  mile from milk station. Highways, good. Surface of farm, rolling. Altitude, about 1,100 feet. Soil, limestone formation. Acres in meadow, 19; in timber, 3, beech and maple, second growth. Acres tillable, 26. Fruit, about 50 apple, 10 plum, 10 cherry, 10 pear, 5 peach and 2 quince trees, also berries, grapes and currants. Best adapted to alfalfa, potatoes, grain and fruit. Fences, mostly new wire, good. House, 8 rooms, good condition. Outbuildings: new barn, 32x44; barn, 32x44, with new cow stable for seven cows, 14x32; new hog house, 10x15; new chicken house, 16x20. All buildings except house have been built within last three years. Watered, house by well and cistern, barns by well. This farm is about 7 miles from Onondaga Lake. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms, cash. Address Alice L. Amidon, owner, Station A, Syracuse, N. Y., R. D. 3.

## TOWN OF POMPEY

Population 2,093

No. 779.—Farm of 144 acres; 5 miles from Manlius P. O., R. D. 3, and railway station on line of Chenango Valley branch of the N. Y. C. R. R.; 40 rods from school;  $1\frac{1}{2}$  miles from church;  $1\frac{1}{4}$  miles from butter factory and cheese factory;  $1\frac{1}{2}$  miles from milk station; 4 miles from condensing plant. Highways, good. Nearest village, Manlius, population 1,314, 5 miles distant, reached by highway; Syracuse, 14 miles distant, reached by trolley from Manlius. Surface, slightly rolling, no hills; lies sloping to southeast. Soil, dark clay and gravel loam. Acres in meadow, 40; in timber, 7 or 8; acres tillable, all except wood lot. 133 apple and a few plum trees. Best adapted to wheat, corn, barley, oats, potatoes, cabbage and alfalfa. Fences, rail and wire, fair condition. House, 30x38, 10 rooms; wing, 12x16; wood house. Barns: horse barn and carriage house, 30x40, painted, in good condition; hog and corn house, 12 x14; hay, grain and cow barn, 42x68; 2 hay barns, 20x30, 18x30. Watered, house by wells, barns by wells and springs, fields by springs. Occupied by tenant. Reason for selling, owner is not a farmer

and is in poor health. Price, \$50 per acre. Terms, part cash, part mortgage. Address C. A. Lakin, owner, Manlius, Onondaga Co., N. Y., R. D. 3.

No. 780.—Farm of 205 acres; located  $4\frac{1}{4}$  miles from Cazenovia P. O., R. D., and railway station on line of Lehigh Valley R. R.; 2 miles from school and churches; 2 miles from condensing plant. Nearest village, Cazenovia, population 1,861, reached by highway. General surface, level. Nature of soil, sandy and gravelly loam. Acres in meadow, 95; in pasture, 95; in timber, 15. Large orchard. Best adapted to dairying and general farm crops. House, stone, 2 stories, all modern conveniences. Tenant house. Outbuildings: horse barn and wagon house, 6 single stalls, 1 box stall. Cow barn, 36x100, concrete floor, stanchions for 100 head of cattle; 2 silos, poultry house, hog house, machinery house, tool house with hot water heat; granary; 3-ton scale with roof. Price, \$15,000. Terms, reasonable amount down, with balance on long time at legal rate of interest. Price includes one team of horses, tools, wagons, fodder, etc. Address C. F. Hunt, owner, Oran, N. Y.

No. 781.—Farm of  $30\frac{1}{2}$  acres; located 6 miles from Jamesville P. O., R. D. 3; 3 miles from railway station at Onativia on line of D., L. & W. railroad;  $1\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from butter factory; 3 miles from milk station and condensing plant. Highways, State road. Nearest city, Syracuse, population 137,249, 13 miles distant, reached by rail, highway or trolley. General surface of farm, level. Nature of soil, limestone and alfalfa land. Acres in meadow, 25; in pasture, 2; in timber, 2, maple, basswood, beech, elm and butternut; acres tillable, 26. Fruit, 16 cherry, 4 pear trees, quince, plum, 13 apple trees, and 6 grape vines. Best adapted to grain, cabbage and all vegetables. Fences, wire, rail and some board. House,  $1\frac{1}{2}$ -story cottage, good condition. Outbuildings: basement barn, 38x40, running spring in basement; barn, 20x20; wood shed, large hennery. House watered by well; barns, by springs; fields, by creek. Occupied by owner. Reason for selling, owner is a widow and an invalid. Price, \$2,500. Terms, cash. Address Mrs. Mary B. Batson, owner, Jamesville, N. Y.

No. 782.—Farm of 64 acres; located 2 miles from Manlius P. O., R. D. 2;  $2\frac{1}{4}$  miles from railway station at Man-

lius on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches;  $\frac{3}{4}$  mile from butter factory;  $\frac{3}{4}$  mile from milk station; 6 miles from condensing plant. Highways, good roads, not hilly. General surface, rolling. Altitude, 800 feet. Nature of soil, limestone. Acres in meadow, 32, alfalfa: in natural pasture, 6; in timber, 4, beech, maple and black walnut; acres tillable, 58. Fruit, 50 apple, 7 pear, 10 cherry trees, 150 raspberry and 10 plums. Best adapted to wheat, corn, barley, oats, potatoes, cabbage and alfalfa. Fences, rail and wire. House, 10 rooms, in good condition. Outbuildings: barns, 30x50-30x40; wagon house, 22x30; hog house, 12x16; hen house, 12x12. House watered by well; barns, by well. Lake Cazenovia about 7 miles away. Occupied by owner. Reason for selling, poor health and old age. Price, \$4,000. Terms, \$2,000 cash, balance mortgage. This is one of the best alfalfa farms in this county. Address C. A. Lakin, owner, Manlius, N. Y.

No. 783.—Farm of 100 acres; located 6 miles from Manlius P. O., R. D. 2; 6 miles from railway station on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches;  $1\frac{1}{2}$  miles from butter factory, cheese factory and milk station;  $4\frac{1}{2}$  miles from condensing plant. Highways, good, level. Altitude, 1,400 feet. Acres in meadow, 40; in natural pasture, 7; in timber, 7, beech and maple; acres tillable, 93. Fruit, apples, berries and cherries. Best adapted to any farm product. Fences, rail, post and wire. House, 10 rooms, nearly new, cost \$2,800 to build. Outbuildings: 2 barns, 30x40, in fair condition; all buildings are better than the average. House watered by well; barns, by spring; Cazenovia Lake about  $4\frac{1}{2}$  miles and Oneida Lake about 12 miles distant. Occupied by tenant. Reason for selling, widow with no one to do the farming. Price, \$4,000. Terms, \$2,000 cash, mortgage of \$2,000. Address Martha Higgins, owner. Manlius, N. Y., or C. A. Lakin, Manlius, N. Y.

No. 784.—Farm of 100 acres; 6 miles from Manlius P. O., R. D. 3; 6 miles from railway station at Manlius, on line of Chenango Valley R. R.; 1 mile from school; 2 miles from Presbyterian, Congregational and Catholic churches, cheese factory and milk station; 5 miles from condensing plant. Highways, good. Nearest village, Pompey Hill, population 400.



FIG. 307.—HOUSE AND VIEW ON FARM NO. 777, TOWN OF  
ONONDAGA, ONONDAGA COUNTY

UNIV



2½ miles distant. Nearest city, Syracuse, population 137,249, 14½ miles distant, reached by highways. Surface of farm, comparatively level. Altitude, 1,450 feet. Soil, clay loam. Acres in meadow, 33; in natural pasture, 25; in timber, 8, beech, maple and hemlock; acres tillable, 36. Fruit, apples, 5 cherry, 4 pear and 6 plum trees. Best adapted to corn, oats, barley, potatoes, alfalfa and cabbage. Fences, rail and wire. House, new, 10 rooms, good condition. Watered, house and barns, by springs; fields, by springs. Occupied by owner and tenant. Reason for selling, owner a widow and unable to take charge of farm. Price, \$45 per acre. Terms, part cash, part on mortgage. Address Martha Higgins, owner, Manlius, N. Y., or C. A. Lakin, agent, Manlius, N. Y.

785.—Farm of 141 acres; located 5 miles from Manlius P. O., R. D. 3; 3 miles from railway station at Oran, on line of W. S. R. R.; ¾ mile from school and church; 1 mile from butter and cheese factory; 1 mile from milk station. Highways, good. Nearest city, Syracuse, population 137,249, 15 miles distant, reached by highway and trolley. Surface, rolling. Soil, dark loam. Ten acres of timber, maple, beech and hemlock; a few pine trees; acres tillable, 131; 75 to 100 apple trees. Best adapted to hay, alfalfa, wheat, barley, oats, corn and buckwheat. Fences, wire and rail, good condition. Large 12-room house, 2 cellar good condition. Barns: hay barn, with basement stable, 56x32; large silo; 2 large sheds attached to barn; grain barn, 30x40; granary, 16x20; carriage house, 25x35. House watered by well; barns, by well; fields, by spring and creek. Occupied by tenant. Reason for selling, owner too far away to give it personal attention. Milk collected at door. Price, on application. Address F. F. Hubbard, owner, Canastota, N. Y. Owner will rent.

No. 786.—Farm of 198 acres; 6 miles from Manlius P. O., R. D. 3, and station on line of Chenango branch of the N. Y. C. R. R.; 50 rods from school; 1½ miles from churches (Presbyterian and Catholic); 1½ miles from butter factory and cheese factory; 2½ miles from milk station; 5½ miles from condensing plant. Good roads, part stone. Nearest large village, Manlius, population 1,314, distant 6 miles by highway; Pompey Village is 1½ miles distant; Fabius, 5 miles distant; and the city

of Syracuse, 16 miles distant. Surface, rolling. Altitude, 1,400 feet. Soil, clay and limestone. Sixty-five acres of meadow, part alfalfa; 65 acres of natural pasture and woodland, beech, elm, pine, maple and hemlock; 132 acres tillable. Fruit consists of 150 apple, 5 pear and 4 plum trees, and ¼ acres of raspberries. Land best adapted to corn, rye, wheat, barley, oats, alfalfa, potatoes and cabbage. Fences, posts and wire, in good condition. House, 12 rooms, in good condition. Horse barn, in good condition; 3 other barns, in fair condition. large; 2 other outbuildings, in fair condition. House has well and cistern water; barns have springs; fields are well watered by springs. Cazenovia Lake is 5 miles distant. Occupied by owner. Reason for selling, owner does not wish to farm any longer. Price and terms on application. Address Thomas Mullen, owner, Manlius, N. Y., R. D. 3.

No. 787.—Farm of 94 acres; located 2½ miles from Pompey P. O., R. D. 1; 4 miles from railway station at Apulia, on line of D. L. & W. R. R.; 2½ miles from school, butter factory, Catholic and Protestant churches; 4 miles from milk station. Highways, somewhat hilly, but good. Nearest city, Syracuse, 17 miles distant, population 137,249, reached by rail and highway. Surface of farm, rolling. Altitude about 1,300 feet. Soil, dark loam with clay sub-soil. Acres in meadow, 25; in natural pasture, 10; in timber, 12, beech and maple; acres tillable, 80. Fruit, 565 apple, 180 cherry, 32 pear, 140 plum and 75 peach trees, also raspberries. Best adapted to fruit, corn, grain and cabbage. Fences, wire, fair condition. House, 28x38, with two wings, fine condition. Outbuildings: barn, 31x108, with three wings; storage barn, 18x22; basement barn, 16x30, good condition. Watered, house, by well; barns, by running water; fields, by springs. Occupied by tenant. Reason for selling, owner has other business. Price, \$125 per acre. Terms, \$7,000 cash, balance on time at 5%. Address L. L. Woodford, owner, 2356 Midland avenue, Syracuse, N. Y.

## TOWN OF SKANEATELES

Population 4,274

No. 788.—Farm of 135 acres; located 3 miles from Skaneateles P. O., R. D. 3; 2½ miles from railway station at Halfway on line of Auburn branch of N. Y. C. R. R.; 1 mile from school; 3 miles from churches; 3 miles from butter fac-

tory and milk station. Highways, good. General surface, somewhat hilly. Nature of soil, loam. Acres that can be used as meadow, 100; in timber, 35, maple, beech and basswood; acres tillable, 100. Fruit, pears and apples. Best adapted to potatoes, corn, oats, etc. Fences, fair condition. House, frame, 1½ stories; 9 rooms. Outbuildings: basement barn, 40x30, also hay barn. House watered by well; fields, by springs. Occupied by tenant. Reason for selling, to close an estate. Price, \$4,000. Terms, ½ cash, balance on mortgage. Address Myra B. Rice, owner, Elbridge, N. Y., or McLaughlin & Mawhiney, brokers, 407 Gurney Building, Syracuse, N. Y.

No. 789.—Farm of 50 acres; located in Skaneateles, which contains 2 hotels, 6 churches, new school, 2 banks, library, etc.; on branch of N. Y. C. R. R.; also accessible to Auburn and Syracuse by electric car, running on 30 minute summer schedule; located near Skaneateles Lake. House, 32x58, 16 rooms, 4 piazzas, bath. House faces road and lake. Outbuildings: horse stable, 40x20; main barn, 100x30, with basement cow stable; silo; hog house, 60x18; poultry house, 36x14. Price, \$12,000. Address George M. Tallcot, owner, Skaneateles, N. Y.

#### TOWN OF SPAFFORD

Population 1,064

No. 790.—Farm of 160 acres; located 10 miles from Homer P. O., R. D. 3; 8 miles from railway station at Little York on line of D., L. & W. R. R.; 1 mile from school and churches; 1 mile from butter factory; 4 miles from cheese factory. Highway, State road. General surface, rolling. Altitude, 1,500 feet. Nature of soil, dark loam. Acres in meadow, 50; in pasture, 40; in timber, 35, beech, maple and hemlock; acres tillable, 120. Fruit, 12 apple, 2 cherry and 4 plum trees; strawberry bed and raspberry patch. Best adapted to corn, grain, potatoes, cabbage and hay. Fences, barbed wire and patent fences, fair condition. House, large, 11 rooms, good condition. Outbuildings: new barn, 82x26, with basement; barn, 40x36; granary, 20x26; hen house, 14x60. House watered by running water; barns, by running water; fields, by springs; ¾ mile from Skaneateles Lake; fine view of same. Occupied by owner. Reason for selling, has other business. Price, \$4,800. Terms, \$2,500 down, \$200 annually. Will rent with option to buy.

Will take mortgage for \$2,300 at 5% or \$200 off for cash. Address Allen B. Cady, owner, Homer, N. Y., R. D. 3.

No. 791.—Farm of 100 acres; located ¼ mile from Spafford P. O., R. D.; 8 miles from railway station at Marietta; ¾ mile from school; ¾ mile from Methodist church; ¾ mile from butter factory; ¾ mile from cheese factory. Highways, level macadam under construction now. Nearest large village and city, Homer, population 2,695, 12½ miles distant, reached by highway. General surface, all level. Altitude, 1,400 feet. Nature of soil, clay loam. Acres in meadow, 60; in natural pasture, 40; in timber, 20, maple, beech and ash; acres tillable, all. Fruit, about a dozen apple trees. Best adapted to potatoes, oats, barley and buckwheat. Fences, line, fairly good, others poor. House, large, 12 rooms, wants renovating throughout. Outbuildings: barn, 30x40, with 17 foot bent for stable. Half wants shingling and re siding. House watered by well; fields, by spring and creek; ¾ mile from shore of Skaneateles Lake. Occupied by tenant. Reason for selling, owner lives elsewhere. Price, \$1,750. Terms, \$500 cash down, balance mortgage. Address Briggs Brothers, owners, Homer, N. Y., or Crandall's Realty Agency, Homer, N. Y.

#### TOWN OF TULLY

Population 1,356

No. 792.—Farm of 400 acres; located 3 miles from Tully P. O., and railway station on lines of D., L. & W. and Lehigh Valley R. Rs.; ½ mile from school; 3 miles from churches of all denominations; 3 miles from butter factory and milk station. Highways, gravel and slate. Nearest village, Tully, population 551, 3 miles distant, reached by highway. Surface of farm, 300 acres level, 100 acres upland. Soil, gravel loam and swamp. Acres in meadow, 100; in natural pasture, 200; in timber, 150, pine, hemlock and hardwood. Acres tillable, 100. Best adapted for alfalfa, cabbage, corn and dairying. Fences, wire, in fair condition. House, brick, 40x50, in good condition. Barn, 36x80, silo, 2 sets of buildings, in good condition. Watered, house and barns, by running water; fields, by springs. Labrador Lake adjoins the farm on one side. Reason for selling, advanced age of owner. Occupied by owner. Price, \$6,000. Terms, easy. Address John Crouch, owner, Tully, N. Y.



**FIG. 308.—HOUSE ON FARM No. 778, TOWN OF ONONDAGA, ONONDAGA COUNTY**



**FIG. 309.—HOUSE ON FARM No. 48, TOWN OF WEST ALMOND, ALLEGANY COUNTY**





## ONTARIO COUNTY

Area, 674 square miles. Population, 52,286. Annual precipitation, 37.99 inches. Annual mean temperature, 49.2°. Number of farms, 4,416. County seat, Canandaigua.

This county is situated in the middle western portion of the state and is one of New York State's strong agricultural counties. It is partly bounded on the east by Seneca Lake and is drained by Flint, Honeoye and Mud Creeks and Canandaigua outlet. The surface is finely diversified with hills, valleys and ridges. The contour is quite irregular in the southwestern part, there being many steep hills and deep valleys. These gradually slope down to ordinary hilly in about the center of the county and to gentle undulations and level country in the northeastern part. The county has considerable woodland on which ash, beech, elm, oak and sugar maple are found. The principal rocks which underlie the county are Onondaga limestone and Devonian sandstone. It also has quarries of gypsum, water limestone and salt. The soil is very productive, ranging from a rich gravelly loam, interspersed with clay in the northern and central portions, to a rich clay loam in the valleys of the southern part of the county. All forms of agriculture, orcharding and vineyards included, are successfully carried on in the county. The leading crops reported are corn, 593,169 bushels; oats, 1,365,487 bushels; wheat, 532,138 bushels; barley, 159,584 bushels; rye, 51,700 bushels; dry beans, 113,303 bushels; potatoes, 1,642,755 bushels; hay and forage, 93,364 tons; hops, 282,253 pounds. The total value of all farm property is \$32,593,635, an increase of 37.4 per cent. since the census of 1900. The average value of farm land alone per acre is \$39.53, a gain of \$8.24 during the last decade. The average value of improved land is \$71.42 per acre. Domestic animals reported: Dairy cows, 13,272; horses, 15,620; swine, 17,035; sheep, 67,502; poultry, 243,068; production of milk, 6,410,876 gallons, which valued with its products amounted to \$465,930.

The county is interested by several trunk lines of railroads, which furnish ample facilities for marketing all products. There are 193 district schools, and Hobart College and William Smith College for Women are located at Geneva. Here also is located the New York State Experiment Station, an institution devoted to scientific agriculture equal to any in the world. Large nurseries are located in this county. The county has 55 miles of state and county roads and 845 miles of improved highways.

## TOWN OF BRISTOL

Population 1,247

No. 793.—Farm of 130 acres; located  $3\frac{1}{2}$  miles from Honeoye P. O.;  $7\frac{1}{2}$  miles from railway station at Hemlock on line of the Lehigh Valley Ry.;  $\frac{1}{2}$  mile from school;  $3\frac{1}{2}$  miles from Congregational and Catholic churches; 4 miles from butter factory. Highway, hilly, but in good condition. Canandaigua, 11 miles distant, reached by highway, population 7,217. General surface of farm, rolling and partly hilly. Altitude, 800 feet. Nature of soil, gravelly loam. Acres in meadow, 45; in pasture, 30; acres tillable, 75. Fruit, 4 acres apples, 30 years old, good condition; 4 acres raspberries. Best adapted to oats, hay, barley, hops and field raspberries. Fences, fair. House, 10 rooms, good condition. Practically new tenant house, 6 rooms. Outbuildings, good house and grain barn, good dry house. Watered, house, by well and cistern; barn, by well; fields, by spring. Occupied by

owner. Reason for selling, old age. Price \$26 per acre. Terms, one-half cash, balance 5%. Address Edson M. Rowly, R. D., Bristol Center, N. Y., or Church & Church, agents, Canandaigua, N. Y. Will rent to responsible tenant.

No. 794.—Farm of 50 acres; located 2 miles from Honeoye P. O., R. D. 2; 7 miles from railway station at Hemlock on line of Lehigh Valley Ry.;  $\frac{1}{2}$  mile from school; 2 miles from Congregational and Catholic churches; 5 miles from butter factory and 2 miles from cheese factory. Highway, hilly, but in good condition. Canandaigua, 13 miles distant, reached by highway, population 7,217. General surface, 40 acres rolling, 10 acres hilly. Altitude, 800 feet. Nature of soil, loam. Acres tillable, 40. Fruit, 125 apple trees. Best adapted to oats, corn and raspberries. Fences, in poor condition. House, 6 rooms, needs repairs. Barns, outbuildings, poor condition. Watered, house, by well; barns, by well. Honeoye Lake, 2

miles distant. Occupied by tenant. Reason for selling, death of owner. Price, \$1,500. Terms, 500 cash, balance 5%. Address Piepont Green, executor, Honeoye, N. Y., or Church & Church, agents, Canandaigua, N. Y. Will rent for cash or with option to buy.

No. 795.—Farm of 86 acres; located 3 miles from Bristol Center P. O.; 8 miles from railway station at Holcomb on line of N. Y. C. Ry.; 1 mile from Congregational, Methodist and Catholic churches; 3 miles from butter factory. Highway, hilly, but in good condition. Canandaigua, 11 miles distant, reached by highway, population 7,217. General surface of farm, rolling. Altitude, 900 feet. Nature of soil, silt loam. Acres in meadow, 70; in timber, 6, oak and chestnut; acres tillable, 80. Fruit, small apple orchard. Best adapted to barley, oats and general crops. Line fences good, others fair. House, 2 stories, 9 rooms. Horse barn, grain barn, 30x50, and basement. Watered, house, well and cistern; barns, by wells. Honeoye Lake 3 miles distant. Occupied by owner. Reason for selling, old age. Price, \$60 per acre. Terms, \$2,000 cash, balance 5%. Address Miles Pestle, owner, R. D., Bristol Center, N. Y., or Church & Church, Agents, Canandaigua, N. Y.

#### TOWN OF CANANDAIGUA

Population 9,405

No. 796.—Farm of 60 acres; located at Canandaigua P. O.;  $\frac{3}{4}$  mile from railway station at Canandaigua on line of N. Y. C. Ry.;  $\frac{1}{4}$  mile from school;  $\frac{1}{2}$  mile from Episcopal, Methodist, Presbyterian, Baptist, Congregational and Catholic churches. Highways, level. Nearest city, Canandaigua, population 7,217. General surface of farm, level. Nature of soil, clay loam. All tillable. Fruit, 700 Montmorency cherries, 2 years old, in good condition. Soil is in an excellent state of cultivation. Best adapted to wheat, oats, barley, hay, beans and cabbage. Fences, wire, good. House, stone, 9 large rooms, hardwood floors, hot water heat, bath, gas, electricity, city water. Barn, 36x60, with basement, 30x40; corn barn, hog house, large hen house, garage. Canandaigua Lake,  $1\frac{1}{4}$  miles distant; trolley passes door, to Rochester, Geneva and local. Occupied by owner. Reason for selling, owner wishes to return to Pittsburgh, Pa. Price, \$16,000. Terms, one-

half cash, balance 5%. Will exchange for good income city property. Address Wm. Sperber, owner, Canandaigua, N. Y., or Church & Church, agents, Canandaigua, N. Y.

No. 797.—Farm of 50 acres; located 7 miles from Canandaigua, P. O. and railway station on line of N. Y. C. Ry.; 1 mile from school; 2 miles from Union church; 2 miles from butter factory. Highway, good. Canandaigua, 7 miles distant, population 7,217, reached by highway. General surface of farm, mostly level, some rolling. Altitude, 900 feet. Nature of soil, silt loam. Acres in meadow, 15; in pasture, 10; in timber, 5, oak and chestnut; acres tillable, 30. Fruit, 3 acres of apples, 6 acres of raspberries. Adapted to all kinds of crops. Fences, fair. House, 8 rooms, good condition. Barn, 30x40, needs repairs. Watered, house, by well; barns, by well; fields, by spring. Canandaigua Lake 2 miles away. Occupied by owner. Reason for selling, old age. Price, \$3,250. Terms,  $\frac{1}{2}$  cash, balance 5%. Address R. M. Knapp, owner. R. D., Bristol Center, N. Y., or Church & Church, agents, Canandaigua, N. Y. Will rent to responsible party.

#### TOWN OF FARMINGTON

Population 1,568

No. 798.—Farm of 285 acres; located 3 miles from Shortsville P. O., R. D. 1. and railway station, on line of N. Y. C. R. R.; 3 miles from railway station at Farmington, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school and Protestant churches. Highways, good. Nearest city, Canandaigua, population 7,217,  $3\frac{1}{2}$  miles distant, reached by highway. Surface of farm, rolling. Soil, clay subsoil. Acres in meadow, 60; in natural pasture, 50; in timber, 25, beech, maple and elm; acres tillable, 250. Fruit, 4 acres of orchard, apples, peaches and pears. Adapted to any crop grown in this climate. Fences, rail and wire, fair condition. Large double house, 18 rooms, fair condition. Outbuildings, horse barn, 28x36, carriage house, 20x30, barn, 30x55, barn, 30x60, shed, 18x50, and hen house, 16x50, good condition. Watered by well and springs. Occupied by owner. Reason for selling, ill health of owner. Price, \$85 per acre. Terms, will take mortgage for \$10,000, balance cash. Address C. H. Herendeen, owner, Shortsville, N. Y., R. D. No. 1. Owner will rent.

TOWN OF GENEVA

Population 1,086

No. 799.—Farm of 16¼ acres; located ½ mile from Geneva P. O.; ¾ mile from railway station at Geneva, on line of N. Y. C. and L. V. R. Rs.; ¼ mile from school; ½ mile from Catholic and Protestant churches. Highways, good. Soil, gravelly loam. Acres tillable, 16¼. Best adapted to wheat, oats, barley and fruit. No buildings. Watered by well. Occupied by tenant. Reason for selling, advanced age of owner. For price and terms address Mrs. L. I. Boyd, owner, 12 Castle St., Geneva, N. Y.

No. 800.—Farm of 50 acres; located 4 miles from city of Geneva; ¼ mile from railway station at Billsboro, on line of N. Y. C. R. R. (Pa. Div.); 1 mile from school; 4 miles from Catholic and Protestant churches; 4 miles from milk station. Highways, gravel, good condition. Surface of farm, slightly rolling. Soil, some clay and some sand. All tillable, except 2 acres of timber. Fruit, apples, peaches, pears, plums, cherries and quinces. Best adapted to corn, oats, potatoes, cabbage, wheat, etc. House, 14 rooms, good condition, brick. Also good tenant house. Outbuildings, 2 barns. Watered, house, by spring; barns, by well; fields, by spring. Farm has lake front, number of cottage sites, beautiful location. Occupied by owner. Reason for selling, ill health of owner. For price and terms address Mrs. Elizabeth Rupert, owner, Geneva, N. Y., R. D. 1.

TOWN OF PHELPS

Population 4,733

No. 801.—Farm of 54 acres; located ½ mile from railway station at Oaks Corners, on line of N. Y. C. R. R.; ¾ miles from Presbyterian church; 4½ miles from butter factory and milk station. Highways, good. Nearest city, Geneva, population 12,446, 4½ miles distant, reached by rail and highway. Surface of farm, level. Soil, sandy loam. Acres in natural pasture, 15; in timber, 1, ash and soft maple; acres tillable, 40. Fruit, apples, cherries, peaches and pears. Best adapted to general farming. Fences, wire, poor. House, 12 rooms, good condition. Outbuildings, basement barn, 72x26; hen house, 17x17, good condition. Watered by well. This farm is 4½ miles from Seneca Lake. Reason for selling, owner in other business. Price, \$5,000. Terms, \$3,000 cash, balance on mortgage

at 5% interest. Address Lincoln G. Backus, owner, Monrovia, Calif. Owner will rent.

TOWN OF RICHMOND

Population 1,277

No. 802.—Farm of 100 acres; located 6 miles from Honeoye P. O., R. D. 1; 8 miles from railway station at Naples on line of Lehigh Valley R. R.; 1 mile from school; 3 miles from churches. Highways, fair. Altitude, 1,200 feet. General surface of farm, sloping. Nature of soil, silt and shale loam. Acres in timber, 90, 30 acres virgin forest, balance 60 years old. Best adapted to pasture; potatoes, when improved. Fences, wire. No house or barns. Honeoye Lake, 1½ miles distant. Reason for selling, owner has too much land. Price, \$1,000. Terms, easy. Address B. G. Abbey, owner, East Bloomfield, N. Y., route 3.

TOWN OF SOUTH BRISTOL

Population 965

No. 803.—Farm of 220 acres; located 5 miles from Honeoye P. O.; 10 miles from railway station at Hemlock or Naples, on line of Lehigh Valley R. R.; ½ mile from school; 5 miles from churches, butter factory, cheese factory and milk station. Highways, part hilly, part State road. Nearest city, Canandaigua, population 7,217, 20 miles distant. Surface of farm, mostly gentle slope, part rolling. Altitude, about 1,600 feet. Soil, mostly loam, a few acres of muck. Acres in meadow, 50; in natural pasture, 90; in timber, 50, oak, pine, chestnut, maple, ash, hickory, elm, etc.; acres tillable, 80. Fruit, old apple orchard, some young peach and pear trees. Best adapted to hay, oats, potatoes, beans, raspberries and apples. Fences, mostly woven wire, some rail, good condition. House, 8 rooms, good condition. Outbuildings, barn, 34x50; barn, 34x48; barn, 34x36; wagon shed, work shop, hen house and evaporator. Watered by well and springs. This farm is 2 miles from Honeoye Lake. Occupied by owner. Reason for selling, advanced age of owner, who has another farm. Price, \$6,500. Terms, \$2,500 cash, balance on bond and mortgage. Address S. S. Williams, owner, Honeoye, N. Y. Owner will rent.

No. 804.—Farm of 211 acres; located 7 miles from Naples P. O., R. D. 4; 9 miles from railway station at Naples on line of Lehigh Valley R. R.; 140 rods

from school;  $1\frac{1}{2}$  miles from Union church; 6 miles from butter factory. Highway, hilly, but in good condition. Canandaigua, 12 miles distant, reached by highway, population 7,217. General surface of farm, hilly, sloping to shore of Canandaigua Lake. Altitude, 1,200 feet. Nature of soil, Ontario loam. Acres in timber, 60; acres tillable, 130. Fruit, 7 acres of apples, 20 acres of grapes and 17 acres black raspberries. Best adapted to oats, corn, barley and hay. Fences, chiefly wire, good condition. House, 15 rooms, good condition, steam heat; 6-room tenant house. Barn, 36x60, and basement; good dry house, 20x40, and 24x26; tool house, packing house. Watered, house, by well and cistern; barns, by wells. Fine view of Canandaigua Lake. Occupied by owner. Reason for selling, wants smaller place. Price, \$75 per acre. Address Elmer Coye, owner, R. D., Naples, N. Y., or Church & Church, agents, Canandaigua, N. Y.

#### TOWN OF VICTOR

Population 2,393

No. 805.—Farm of 130 acres; located 4 miles from Victor P. O., R. D. No. 1, and railway station on line of N. Y. C. and Lehigh Valley R. Rs.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches; 5 miles from cheese factory; 2 miles from milk station. Nearest city, Rochester, 18 miles distant, population 218,149,

reached by good highway and trolley. General surface, rolling. Nature of soil, sand, gravel. Acres in meadow, 50; in timber, 25, maple, beech; acres tillable, 90. Fruit, apples, 60 Baldwins, 60 Greenings. Best adapted to wheat, potatoes and oats. Fences, wire, good condition. House, large and good condition. Barn, 160x32, good condition. House watered by well; barn and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$11,700. Terms, \$5,000 down, balance on mortgage. Address William Gillett, owner, Victor, N. Y.

No. 806.—Farm of 118 acres; located  $3\frac{1}{2}$  miles from Victor P. O., R. D. No. 4; 1 mile from railway station at Fishers on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches. Highways, good. Nearest city, Rochester, population 218,149, 15 miles distant, reached by rail and highway. General surface, rolling. Altitude, 650 feet. Nature of soil, loam. Acres that can be used as meadow, 40; in timber, 40, oak, hickory and white wood; acres tillable, 78. Fruit, 140 apple trees. Best adapted to grain and hay. Fences, poor. Large house in good condition, also furnace. Barns, fair condition. House, watered by well; barns, by stream, and fields by stream. Occupied by tenant. Reason for selling, to settle an estate. Price, \$6,500. Easy terms. Address R. P. Cummings, owner, Akron, N. Y.

#### ORANGE COUNTY

Area, 781 square miles. Population, 116,001. Annual precipitation, 52.5 inches. Annual mean temperature, 49.3°. Number of farms, 3,935. County seat, Goshen.

This county is situated in the southeastern part of the state bordering on New Jersey; the eastern line is bounded by the Hudson River and the southwestern by the Delaware River. It is intersected by the Wallkill River and also drained by the Shawangunk and Ramapo Rivers.

The surface is mostly long sloping hills diversified with broad fertile valleys, except in the southeastern part and along the western border. These hills do not attain any great height and are arable to their summit. The eastern region of the county comprises a large part of the highlands of the Hudson. The hills are divided by a valley which opens on the Hudson just below Newburg, the soil of which is of a limestone formation. Directly west of these highlands extending north and south is the broad Wallkill Valley with its rich soil of black dirt and gravelly loam. To the west of this valley lies another chain of hills, the soil of which is mostly a gravelly loam. Granite, limestone and iron ore are found in this locality. The county ships to New York City millions of gallons of milk and the cities of northern New Jersey can be reached from any part of it in two hours. The total value of all farm property is \$35,516,309, an increase of 44.6 per cent. over that shown in the census of 1900. The average price of improved farm land is \$75.28, an increase of 23.52 per cent. over that of ten years ago. The principal crops reported are corn, 451,179 bushels; oats, 114,215 bushels; rye, 48,960 bushels; potatoes, 288,341 bushels; hay and forage, 133,241 tons. Domestic animals reported: Horses, 10,723; swine, 8,838; sheep, 3,904; poultry, 249,061; dairy cows,

45,882; 20,000 head of cattle other than dairy cattle are also reported. There was produced 30,878,586 gallons of milk, which with the product of 68 milk stations and factories sold for \$3,537,640. The county is traversed with main lines and branches of several important railroads, including the New York, Ontario & Western; Pennsylvania; West Shore and Erie. West Point, the United States Military Academy, is located on the shore of the Hudson River in this county. There are 169 district schools, many excellent high schools, several classical schools, Wallkill Academy and Union schools at Middletown and the Newburgh Institute for Boys at Newburgh. The county has 28 agricultural societies, 60 miles of state and county roads and 1,343 miles of improved highways.

## TOWN OF BLOOMING GROVE

Population 2,110

No. 807.—Farm of 140 acres;  $1\frac{1}{2}$  miles from Craigville P. O. and railway station, on line of Erie R. R.;  $\frac{1}{2}$  mile from Farmingdale; 5 miles from Goshen. Creamery and school houses near farm. Highways, good. Soil, loam. Acres tillable, 125; timber, 15. Fruit, mostly apples. Occupied by owner. House, 13 rooms, in good condition; also tenant house. Barn, improved cow stable, wagon house and ice house. Watered, house, by well and cistern; fields, by Cromeline Creek and springs. Farm is suitable for dairy, horses, poultry, grain or for a summer home. Has an especially fine water supply. Price, \$8,500. Terms, two-third cash. Address, Wm. V. Seaman, owner, Locust Lane Farm, Craigville, N. Y.

## TOWN OF CHESTER

Population 2,061

No. 808.—Farm of 343 acres; located  $3\frac{1}{2}$  miles from Chester P. O., R. D. and railway station at Chester, Oxford and Monroe, on line of Erie R. R.;  $1\frac{1}{2}$  miles from school; 4 miles from churches; 4 miles from butter factory; 4 miles from cheese factory; 4 miles from milk station, and  $2\frac{1}{2}$  miles from condensing plant. Highways, good. Nearest village, Goshen, population 3,081, reached by rail and highway. General surface, rolling and level. Altitude, 507 feet. Fertile soil. Acres that can be used as meadow, 100; in natural pasture, 75; in timber, 40, all kinds, fine quality; acres tillable, 200. Fruit, apples, pears, peaches, cherries, plums, currants, raspberries and blackberries. Best adapted to corn, grain and all vegetables. Fences, rail, stone, board and wire. House, frame, 21 rooms, excellent condition. Outbuildings, horse stable, 2 wagon houses, milk house, hay barn, granary, shop, ice house and poultry house. House, watered by spring; fields, by springs, brooks and lake. Bull's pond

(private) on place. Occupied by owner. Reason for selling, owner a widow. Price, \$30,000. Terms, \$15,000 cash, balance on mortgage; 3 tenant houses on place. Address Mrs. Charles I. Bull, owner, Chester, N. Y.

No. 809.—Farm of 265 acres; located 2 miles from Chester P. O. and railway station on line of Erie R. R.; 1 mile from school, cheese factory and milk station;  $1\frac{1}{2}$  miles from Protestant churches. Highways, good. Nearest large village, Goshen, population 3,081, 5 miles distant, reached by highway. Surface of farm, part level, part hilly. Altitude, about 500 feet. Soil, clay, good. Acres in meadow, 165; in natural pasture, 100; in timber, 10, all kinds of hard wood; acres tillable, 200. Fruits of all kinds. Best adapted to grass and all kinds of grain. Fences, stone, rail and wire. House, 13 rooms, bath, hot water heat, electric lights, 1 large hall, good condition. Outbuildings, plenty of barns, mostly new; room for 100 cows, good condition. Watered by well, cistern and windmill. Occupied by owner. Reason for selling, owner wishes to retire. Price, \$4,500. Terms, one-half cash. Address James Seeley, owner, Chester, N. Y.

## TOWN OF CORNWALL

Population 5,690

No. 810.—Farm of 3 acres; 1 mile from Cornwall P. O. and railway station, on line of W. S. R. R.; 1 mile from school;  $\frac{1}{2}$  mile from churches of all denominations. Highways, good. Nearest city, Newburgh, population 27,805, 5 miles distant, by highway and 4 miles by rail; 8-minute ride by train. Surface of farm, level. Soil, good. Acres tillable, 2. Fruit of various kinds. Best adapted to gardening. Fences, in fair condition. House, 10 rooms, in good condition. Barn, in fair condition. Watered, house, by spring. Near Hudson River and Storm King mountain. A healthful and beautiful location, with fine view. Occupied by owner. Reason

for selling, owner wishes to return to city. Price on application. Address Mrs. Abram S. Clark, owner, Cornwall Landing, N. Y., Box 21.

No. 811.—Farm of 50 acres; located  $\frac{1}{2}$  mile from Cornwall-on-Hudson P. O.; 1 mile from railway station at Cornwall Landing, on line of W. S. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches, and  $1\frac{1}{2}$  miles from milk station. Highways, good. Nearest city, Newburgh, population 27,805, 5 miles distant, reached by rail or highway. General surface, rolling. Nature of soil, good. Acres that can be used in meadow, 50; in timber, 3, mostly oak. Fruit, all kinds. Best adapted to all kinds of crops. Fences, stone wall and wire, in good condition. House, 11 rooms and bath, hot and cold water. Outbuildings, horse barn, cow barn, wagon barn and shop, all in good condition. House, watered by village water; barns, by well; fields, by brook and springs. Hudson River, 1 mile distant, Storm King mountain in view of farm. Occupied by owner. Reason for selling, to settle an estate. Price on application. Address Edward A. Clark, one of heirs, Cornwall-on-Hudson, N. Y.

No. 812.—Farm of 75 acres;  $\frac{1}{2}$  mile from Meadow Brook P. O.;  $\frac{1}{2}$  mile from railway station at Meadow Brook, on line of O. & W. R. R.; 1 mile from school, Presbyterian and Methodist churches;  $\frac{1}{2}$  mile from milk station; 5 miles from condensing plant. Highways, macadamized roads. Nearest city, Newburgh, population 27,805, 5 miles distant, reached by rail or highway. Surface of farm, slightly rolling. Soil fertile. Acres in meadow, 45; in natural pasture, 20; in timber, 6; oak, hickory and chestnut; acres tillable, 40. Best adapted to corn, wheat, rye, oats and potatoes, or for a fruit and market gardening farm. Fences, stone. House, 30x50, in good condition. Barn, 28x40, in good condition. Watered, house and barn, by well; fields, by springs and stream; 3 miles from Ramsdale Lake. Occupied by owner. Reason for selling, owner engaged in other business. Price, \$7,000. Terms, easy. Address Charles S. Satterly, owner, Meadow Brook, N. Y.

#### TOWN OF CRAWFORD

Population 1,659

No. 813.—Farm of 160 acres; located  $1\frac{1}{2}$  miles from Thompson Ridge P. O.

and railway station, on branch line of Erie R. R.;  $1\frac{1}{4}$  miles from school, Protestant and Catholic churches; 3 miles from butter factory, cheese factory and milk condensing plant;  $1\frac{1}{4}$  miles from milk station. Highways, good. Nearest city, Middletown, 11 miles distant, population 15,313, reached by rail and highway. Surface of farm, part level, part rolling. Altitude, about 1,000 feet. Soil, sandy loam, gravelly loam and black dirt. Acres in meadow, 30; in natural pasture, 30; in timber, 20, chestnut and white oak; acres tillable, 80. Fruit, 60 apple, 8 pear, 3 peach, 6 plum trees; also several grape vines. Best adapted to corn, potatoes, beets, oats, wheat, rye and hay. Fences, mostly wire, good condition. House, 32x30, 2 stories, large attic, addition, 18x24, 13 rooms. Outbuildings: barn, 132x24; addition, 24x12; wagon house, 24x24; carriage house, 20x14; large hen house; wood house, pig pen, ice house; milk house and smoke house. Watered, house and barn, by never-failing well; fields, by springs and brooks. Occupied by owner and tenant. Reason for selling, scarcity of help. Price, \$6,000. Terms, \$3,000 down, balance on mortgage. Address Mrs. Fanny J. Gillespie, owner, Thompson River, N. Y.

#### TOWN OF HAMPTONBURGH

Population 1,168

No. 814.—Farm of 98 acres; located 3 miles from Goshen P. O. Surface of farm, level. Soil, loam. Acres in meadow, 40; in natural pasture, 50; in timber, 8, oak, chestnut and hickory; acres tillable, 90. Fruit, apples, pears and plums. Best adapted to grass, grain, peaches, grapes, etc. Fences, wire, good. House, 9 rooms, first-class condition; 2 good tenant houses. Outbuildings, 2 large barns, 1 for cattle and hay, 1 for horses and hay. Watered by springs and creek. Occupied by owner. Price, \$10,000. Terms, one-half cash; 19 cows, 3 horses, all tools, wagons, etc., included in above price. Address G. R. Coleman, owner, Goshen, N. Y., or E. Brionne & Co., brokers, 23 Duane street, New York, N. Y.

#### TOWN OF MONTGOMERY

Population 7,439

No. 815.—Farm of 82 acres; located 1 mile from Montgomery P. O., Erie 3 and railway station on line of Erie

R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches; 1 mile from milk station. Highway, State road. General surface of farm, rolling, some level. Altitude, 500 feet. Nature of soil, loam and gravel. Acres in meadow, 8; in pasture, 25; acres tillable, 24. Fruit, young orchard, 1 year old peaches, pears and apples. Best adapted to hay, grain and small fruits. Fences, new, woven wire, painted posts. House, 10 rooms, almost new, heated, hardwood trim, size 30x36. Outbuildings: new barn, metal roof, 2 stories, 24x42. House watered by artesian well and cistern; well in barn; fields, by small stream. Occupied by tenant. Reason for selling, impossible for owner to handle it. Price, \$5,000. Terms, \$2,000 cash, \$3,000 mortgage, long term. Will rent with option to buy. Address J. M. Wilkin, owner, Montgomery, N. Y.

No. 816.— Farm of 4 acres; located  $\frac{3}{4}$  mile from Montgomery P. O., R. D. 3 and railway station on line of Erie R. R.; school and churches across road. Highway, State road. General surface, level. Altitude, 500 feet. Nature of soil, loam; acres tillable, 4. Best adapted to gardening. Fences, wire, all new. House, new, bungalow type, 7 rooms, hardwood floors and modern conveniences. House watered by cistern and well. Will rent. Reason for selling, owner has no use for same. Price, \$2,750. Terms, \$1,000 cash, balance 5 years, 5% mortgage. Address J. M. Wilkin, owner, Montgomery, N. Y.

## TOWN OF MOUNT HOPE

Population 1,786

No. 817.— Farm of 195 acres; located  $1\frac{1}{4}$  miles from Otisville P. O., R. D., and railway station on line of Erie R. R.;  $1\frac{1}{4}$  miles from school and churches, milk station and condensing plant. Nearest city, Middletown, population 15,313, 8 miles distant, reached by rail or good highway. General surface, sloping towards south, some level. Altitude, 912 feet. Acres in meadow, 30; in pasture, 50; in timber, 50, oak, maple and chestnut; acres tillable, 65. Fruit, 60 trees, varieties. Best adapted to hay, grain and potatoes. Fences, stonewall, wire, good condition. House, 12 rooms, good condition. Outbuildings: barn, 92x26, large wagon house, granary and poultry house; all in good condition. House and barns watered by running spring; fields, by springs and brook. Occupied by tenant. Reason for selling, to settle

estate. Price, \$7,500. Terms,  $\frac{1}{2}$  down, balance on mortgage. Address Mrs. F. Amelia Sayer or Mrs. Frank C. Harris, owners, 8 Harrison St., Middletown, N. Y.

No. 818.— Farm of 140 acres; 2 miles from Guymard P. O. and railway station, on line of E. R. R.;  $\frac{3}{4}$  mile from school; 4 miles from churches; 2 miles from milk station; 4 miles from milk condensing plant. Highways, good. Nearest large village, Otisville, population about 1,000, reached by highway, 4 miles distant. Surface, level. Soil, gravel. Acres in meadow, 50; natural pasture, 40; timber, 6, oak and chestnut; acres tillable, 44. Fruit, about 50 apple trees. Best adapted to wheat, corn, rye, oats and buckwheat. Large house and small tenant house, good condition. Outbuildings: barn, 28x80, with addition, 16x30; inclosed shed, 15x60, in fair condition; wagon and corn house. Watered by well, springs and running water. Occupied by owner. This farm will keep from 25 to 30 cows; well watered; adapted to fruit raising; can be worked by machinery. Price, \$8,500. Terms,  $\frac{1}{2}$  cash. Address W. W. Clark, owner, Otisville, N. Y.

No. 819.— Farm of 75 acres; 2 miles from Guymard P. O. and railway station, on line of Erie R. R.;  $\frac{3}{4}$  mile from school; 4 miles from churches; 2 miles from milk station; 4 miles from milk condensing plant. Highways, good. Nearest large village, Otisville, population about 1,000, 4 miles distant, reached by highway. Surface, level. Soil, gravel. Acres in meadow, 40; in natural pasture, 15; tillable, 20. Fruit, apples. Best adapted to wheat, corn, rye, oats and buckwheat. Fences, stone wall, fair condition. House, large; also tenant house, good condition. Outbuildings: barn, 28x80; addition, 16x20; shed, 15x60; wagon and corn house, fair condition. Watered by well and springs. Occupied by owner. Reason for selling, owner has 2 farms and cannot attend to both. Price, \$5,000. Terms,  $\frac{1}{2}$  cash. Address W. W. Clark, owner, Otisville, N. Y.

No. 820.— Farm of 128 acres; located 7 miles from Middletown P. O., R. D.; 4 miles from railway station at Otisville, on line of Erie R. R.;  $\frac{1}{2}$  mile from school and churches; 4 miles from milk station and condensing plant. Highways, good. Nearest city, Middletown, population 15,313, reached by rail and highway. Surface of farm, compara-

tively level. Altitude, 900 feet. Soil, heavy loam. Acres in meadow, 12; in natural pasture, 30; in timber, 20, chestnut and oak; acres tillable, 60. Fruit, 30 apple, 12 peach and 10 pear trees. Adapted to all farm crops. Fences, stone and wire. House, 60x30, fine basement, in good condition. Outbuildings: hen house, granary and ice house. Watered, house and barns, by well. The Shawangunk River runs through this farm. Occupied by owner. Reason for selling, ill health. Price, \$6,000. Terms, \$2,000 cash, balance on mortgage. All stock and farming implements are included in the price of the farm. Address A. L. Saxton, owner, Middletown, R. D. No. 1.

No. 821.—Farm of 117 acres; located 2 miles from Otisville P. O. and railway station on line of Erie R. R.; 1 mile from school; 2 miles from Methodist, Catholic and Presbyterian churches; 2 miles from milk station. Highways, good. Nearest city, Middletown, population 15,313, 9 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,050 feet. Acres in meadow, 15; in natural pasture, 30; in timber, 30, oak and chestnut; acres tillable, 42. Fruit, 50 apple, 5 plum, 6 cherry and 8 pear trees. Best adapted to corn, wheat, rye, oats and buckwheat. Fences, stone and wire, in good condition. House, 10 rooms, in good condition. Outbuildings: large barn, milk house, corn crib, ice house, hen house, all in good condition. Watered, house, by running spring; barns, by running water; fields, by springs. Occupied by owner. Reason for selling, to settle an estate. Price, \$6,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. There is also  $\frac{1}{2}$  acre of strawberries, raspberries and grapes on this farm. Address Mrs. Emily A. Fuller, owner, Otisville, N. Y., Box 208.

#### TOWN OF NEW WINDSOR

Population 2,667

No. 822.—Farm of 184 acres; located  $2\frac{1}{2}$  miles from Rocklet P. O., R. D. No. 1;  $2\frac{1}{2}$  miles from railway station at Little Britain on line of N. Y., O. & W. R. R.;  $1\frac{3}{4}$  miles from school; 2 miles from churches and 2 miles from milk station. Highways, good. Nearest city, Newburgh, population 27,805, 9 miles distant, reached by rail or highway. Surface of farm, rolling. Altitude, 500 feet. Soil, clay and silt loam. Acres in meadow, 20; in natural pasture, 40; in

timber, 30, maple, hickory, ash, etc.; acres tillable, 80. Fruit, about 100 apple trees. Best adapted to hay, potatoes, maize, rye, barley, fruit, etc. Fences, rail and wire, in good condition. House, 12 rooms, in first class condition, bath and other improvements. Outbuildings: 2 large hay barns, horse stable, cow barn, carriage house, tenant house, ice house, granary, poultry house and work shop. Watered, house, by well and cistern; barns, by well; fields, by spring and pond. This farm is 9 miles from the Hudson River. Reason for selling, old age of owner. Price, \$9,000. Terms, \$5,000 cash, balance on bond and mortgage. Address Mr. A. H. Cooley, Little Britain, N. Y., or J. P. Christensen, agent, 320 Fifth avenue, New York city.

No. 823.—Farm of 130 acres; located  $1\frac{1}{2}$  miles from Rocklet P. O., R. D. 1 and  $1\frac{1}{2}$  miles from railway station at Rock Tavern on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from milk station. Nature of highway, good. Nearest city, Newburgh, population 27,805, 9 miles distant, reached by rail or highway. General surface of farm, rolling. Altitude, 500 feet. Nature of soil, sandy loam; acres tillable, 100. Fruit, apple orchard, which bears about 1,000 barrels yearly; 300 peach trees; other fruit. Best adapted to fruit, hay and grain. Fences, wire and stone. House, 12 rooms, nicely located. Outbuildings: hay barn, 20x40; barn, 28x48; machine shed, 14x18; wagon house, granary and 2 poultry houses. House watered by well and windmill; barns by well; fields by brook and springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$13,000. Terms, \$8,000 cash. Address J. McCarty, owner, New Windsor, N. Y., or Westcott & Co., Inc., agents, Newburgh, N. Y.

No. 824.—Farm of 82 acres; located  $2\frac{1}{2}$  miles from Rocklet P. O., R. D. 1;  $2\frac{1}{2}$  miles from railway station at Little Britain on line of N. Y., O. & W. R. R.;  $1\frac{1}{2}$  miles from school; 2 miles from churches;  $\frac{1}{2}$  mile from milk station. Nature of highway, good. Nearest city, Newburgh, population 27,805, 8 miles distant, reached by rail or highway. General surface of farm, rolling. Altitude, about 500 feet. Nature of soil, clay loam and sand loam. Acres in meadow, 15; in pasture, 15; in timber, 5, woodland; acres tillable, 60.

Fruit, 100 apple, 15 peach, 10 plum, pear, crabapple and cherry trees; 25 grape vines; some quinces, strawberries, etc. Best adapted to apples, hay and grain. Fences, mostly wire, good condition. House, 8 rooms, running water and bath, all in good condition. Outbuildings: small cottage for help; barn holding 50 tons of hay; carriage house, cow and horse stable for 20 head; granary, smoke house, poultry house, etc. House watered by well and cistern; barns, by well; fields, by spring and wells. Occupied by owner. Reason for selling, wants large farm for extensive stock raising. Price, \$6,500. Terms, one-half cash. Address A. C. Westcott, owner, Newburgh, N. Y., or Westcott & Company, Inc., agents, 137 Broadway, Newburgh, N. Y.

No. 825.—Farm of 96 acres; located 2½ miles from Rocklet P. O., R. D. and 2½ miles from railway station at Rock Tavern on line of N. Y., O. & W. R. R.; 1 mile from school; 3 miles from churches; 2 miles from milk station. Nearest city, Newburgh, population 27,805, 9 miles distant, reached by rail or highway. General surface of farm, rolling. Altitude, 500 feet. Nature of soil, sandy and clay loam. Acres in meadow, 20; in pasture, 20; in timber, 16. Acres tillable, 45. Fruit, 75 apple, 100 peach, abundance of cherry, plum and pear trees and grapes. Best adapted to fruit and grain. Fences, stone and wire, good. House, 7 rooms, frame, good condition. Small stable and chicken house, both in good condition. House watered by well; fields, by springs. Farm operated by owner. Reason for selling, has other farm. Price, \$3,200. Terms, \$1,000 cash or less, balance on mortgage. Address Arthur C. Westcott, owner, Rocklet, N. Y., R. D. 1.

## TOWN OF WALKKILL

Population 2,578

No. 826.—Farm of 110 acres; located ½ mile from Stony Ford P. O. and railway station on line of N. Y., O. & W. R. R.; ½ mile from school and churches; ½ mile from milk station. Highways, good. Nearest village, Goshen, population 3,081, 4 miles distant, reached by rail or highway. Surface of farm, level. Soil, loam. Acres in meadow, 40; in natural pasture, 60; in timber, 10, oak, chestnut and hickory. Acres tillable, 100. Fruit, apples, pears, peaches, plums, etc. Best adapted to hay, grain, potatoes,

fruit, etc. Fences, wire, in good condition. House, 12 rooms in fine condition. Outbuildings: several barns, hen house, wood house. Price, \$10,000. Terms, ½ cash, balance on mortgage. Twelve cows, 3 horses, 40 tons hay, wagons, machinery, etc., included in price of farm. Address F. A. Vandemark, owner, Stony Ford, N. Y., or E. Brionne & Co., brokers, 23 Duane St., New York city.

No. 827.—Farm of 87 acres; located 4 miles from Middletown P. O., R. D. and railway station on line of N. Y., O. & W. and Erie R. Rs.; 1 mile from school and churches; 2 miles from milk station. Highway, good. General surface, rolling. Altitude, 700 feet. Nature of soil, sandy loam. Acres in meadow, 25; in pasture, 15; acres tillable, 50. Large apple orchard. Best adapted to fruit, hay and grain. Fences, stone and wire. House, 11 rooms, frame, hot and cold running water. Outbuildings: new barn, 36x50, concrete floor, stanchions for 16 head; granary, wagon house, 2 new poultry houses. Barns watered by well, fields by brook and spring. Occupied by owner. Reason for selling, poor health. Price, \$5,500. Terms, \$2,200 cash, balance on mortgage. Address John A. Carshaw, owner, Middletown, N. Y., or Westcott & Company, Inc., agents, 137 Broadway, Newburgh, N. Y.

## TOWN OF WARWICK

Population 7,141

No. 828.—Farm of 100 acres; 2 miles from Greenwood Lake P. O. and station, on line of Erie R. R.; 2 miles from school and Protestant churches. All milk can be sold to hotels in vicinity. Highways, good. Nearest village, Greenwood Lake, population 200, 2 miles distant. Surface, fairly level. Soil, loam and gravel. Thirty acres in meadow; 50 acres of natural pasture; 20 acres of timber; 30 acres tillable. Fifty apple, 20 pear and 10 plum trees. Adapted to hay. Fences, in fair condition. House, 32x30, in good condition. Also tenant house. Church, 26x36, which could be made into a house. Barn, 30x60; wagon house, 28x30, shop attached; ice house, 20x20; hog house, 12x14; good, stone smoke house; wood house. The buildings on this farm are nearly new. House has well water; barns have brook near, and fields are well watered. Greenwood Lake is 5 minutes' walk from farm. Occupied by tenant. Reason for selling, owner going into other business.

Price, \$4,000. Terms,  $\frac{1}{2}$  cash and  $\frac{1}{2}$  remain on mortgage. Address James Hall, owner, Greenwood Lake, N. Y.

No. 829.—Farm of 125 acres; located  $\frac{1}{4}$  mile from New Milford P. O. and railway station on line of Lehigh Valley and N. Y. C. R. Rs.;  $\frac{1}{2}$  mile from school and churches; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,318, 4 miles distant, reached by rail or highway. Surface of farm, rolling. Altitude, 650 feet. Soil, clay loam. Acres in meadow, 70; in natural pasture, 35; in timber, 15, chestnut and oak. Acres tillable, 100. Fruit, 12 acres of peach and apple trees. Best adapted to fruit, dairying and grain. Fences, stone, in good condition. House, large, 14 rooms, in good condition. Outbuildings: barn, 30x70; wagon house, 24x40; barn, 30x40; ice house, silo, work shop and hen house. Watered, house, by well; barns, by springs; fields, by springs and streams. Occupied by tenant. Reason for selling, ill health of owner. Price, \$8,600. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 4 $\frac{1}{2}$ %. Address Harry Vail, owner, New Milford, N. Y.

No. 830.—Farm of 160 acres; located 1 mile from New Milford P. O. and railway station on line of Lehigh & Hudson R. R. Rs.; 1 mile from school;  $1\frac{1}{2}$  miles from church; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,318, 4 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 550 feet. Soil, slate and loam. Acres in meadow, 50; in natural pasture, 10; in timber, 10; rock and white oak. Acres tillable, 150. Fruit, 74 acres of peaches and 4,000 apple trees. Best adapted to fruit and dairying. Fences, wire, in good condition. House, 13 rooms, slate roof, in fine condition. Outbuildings: 3 barns, 28x34, 30x70, 22x40; granary, 28x40; tenant house, 5 rooms and all necessary outbuildings. Watered, house, by well; barns, by springs; fields, by springs and streams. This farm is 3 miles from Po-chuck Mountains. Occupied by owner. Price, \$30,000. Terms, to suit purchaser. Address Harry Vail, owner, New Milford, N. Y.

No. 831.—Farm of 32 acres; located 1 mile from New Milford P. O. and railway station on line of Lehigh and Hudson R. R. Rs.; 2 miles from school;  $1\frac{1}{2}$

miles from churches. Highways, good. Surface of farm, rolling. Altitude, 520 feet. This land is all planted to fruit, about 3,000 peach and apple trees. Best adapted to fruit. Fences, wire, in good condition. No buildings. Watered by springs. Occupied by owner. Price, \$3,500. Terms, \$2,000 down, balance at \$300 per year, interest at 5%. This is a good piece of land for some city man to build a bungalow on. Address Harry Vail, owner, New Milford, N. Y.

No. 832.—Farm of 35 acres; located 1 mile from New Milford P. O. and railway station, on line of Lehigh and Hudson R. R. Rs.; 1 mile from school;  $1\frac{1}{2}$  miles from churches; 1 mile from milk station. Highways, good. Nearest village, Warwick, population 2,318, 4 miles distant, reached by rail and highway. Surface of farm, nearly level. Altitude, 550 feet. Soil, sandy loam. Acres in meadow, 31; in natural pasture, 4; in alfalfa, 8. Acres tillable, 31. Fruit, apples, cherries, pears, etc., for family use. Best adapted to alfalfa and fruit. Fences, stone and wire in good condition. House, 28x34, slate roof, in first class condition. No barn. This farm is 5 miles from Wickham Lake. Occupied by tenant. Price, \$5,000. Terms,  $\frac{1}{2}$  cash, or less, balance on mortgage at 5%. Address Harry Vail, owner, New Milford, N. Y.

No. 833.—Farm of 45 acres; located 3 miles from Warwick P. O., R. D. and railway station, on line of Lehigh & Hudson River R. R.; 1 mile from school; 3 miles from churches. Nearest village, Warwick, population, 2,318. Nature of soil, muck. Acres in meadow and tillable, 45. Best adapted to lettuce, celery, onions, potatoes, corn, etc. Price, \$4,000. Terms, \$500 cash, balance on contract. Address Harry Vail, owner, New Milford, N. Y.

No. 834.—Farm of 15 acres; located  $\frac{1}{2}$  mile from Pine Island P. O. and railway station on line of Erie R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{4}$  mile from churches. Nearest village, Warwick, 5 miles distant, reached by good highway, population 2,318. General surface, level. Altitude, 500 feet. Nature of soil, muck. Acres tillable, all. Best adapted to onions, celery, potatoes, lettuce, etc. Price \$300 per acre. Terms, \$500 down, balance on contract. Address Harry Vail, owner, New Milford, N. Y.

## ORLEAN COUNTY

Area, 399 square miles. Population, 32,000. Annual precipitation, 32.31 inches. Annual mean temperature, 48.9°. Number of farms, 2,780. County seat, Albion.

This county is located in the western part of the state, on Lake Ontario, which forms its northern boundary.

The surface of the county is generally level with gentle undulations to the south. A strip of land about eight miles in width extending inland consists of sandy gravelly loam, then comes a strip about four miles in width with elevation of about 200 feet, the soil of which is a black muck and gravelly loam. The southern part of the county consists of another strip of land about six miles in width, elevation about 500 feet, the soil of which consists chiefly of clay, muck and limestone. On these soils are grown enormous quantities of vegetables of every variety and the apple, peach, pear, plum and quince orchards are very extensive and are kept in the most excellent condition. The county contains valuable quarries of Medina sandstone and Niagara limestone, both of which are choice building stone. There has been recently published by Cornell University a bulletin giving an orchard survey of this county and of Wayne and Tompkins Counties, which can be had upon application. In the production of dry beans, Orleans County leads every other county in the United States, the yield in 1910 being 291,191 bushels. Some of the leading crops in the same year were corn, 375,583 bushels; oats, 584,442 bushels; wheat, 527,634 bushels; barley, 56,496 bushels; potatoes, 571,608 bushels; hay and forage, 57,749 tons. The total valuation of farm property is \$26,551,582, an increase of 70.3 per cent. over that of 1900. The average value of improved land is \$96 per acre. The average price per acre of farm land alone is \$63 per acre. This enormous advance in land values, throughout the county has been caused chiefly by the rapid development of the fruit industry, which has grown to large proportions; Orleans, Niagara, Monroe and Wayne Counties being perhaps the chief contributors to the apple product of New York State for 1912, which totals 6,900,000 barrels.

Domestic animals reported are dairy cows, 7,247; horses, 10,924; swine, 10,960; sheep, 59,766; poultry, 134,740; milk production, 3,268,397 gallons, all of which except that used by one creamery was shipped to Niagara Falls and Buffalo, for which the farmers received \$195,186.

The county is traversed from east to west by the Erie Canal, New York Central & Hudson River railroad and Rome, Watertown & Ogdensburgh railroad, also all trunk lines. The county has 134 district schools with a union school system and academies at Albion and Medina. There are 42 miles of state and county roads and 546 miles of other improved highways. The agricultural organizations of the county are 1 Pomona grange, 10 subordinate granges, a county agricultural society and county fruit growers' association.

## TOWN OF CLARENDON

Population 1,335

No. 835.—Farm of 28 acres; located  $\frac{1}{2}$  mile from Clarendon P. O.; 3 miles from railway station at Holley on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school and churches;  $\frac{1}{2}$  mile from cheese factory. Highways, State road. Population of Holley, 1,679. General surface, rolling. Nature of soil, limestone. Acres in meadow, 15; in pasture, 2; in timber, 4, maple and elm; acres tillable, 21. Fruit, 6 acres of apples, mostly Baldwins. Best adapted to fruit, potatoes, wheat, etc. Fences, wire, extra good. House,  $1\frac{1}{2}$  stories, 8 rooms, furnace, good condition. Outbuildings: good condition, barn, poultry house, hog pen and smoke house. House and barns

watered by wells; fields, by spring. Occupied by owner. Reason for selling, ill health. Price, \$4,500. Terms, \$1,000 cash, balance on long time. Address F. B. Wilcox, owner, Clarendon, N. Y., or W. C. Hill, broker, Holley, N. Y.

No. 836.—Farm of 80 acres; located 5 miles from Holley P. O., R. D., and railway station on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches. Highways, State road. Population of Holley, 1,679. General surface, level. Nature of soil, gravelly loam. Acres in meadow, 75; in timber, 3, hardwood; acres tillable, 75. Fruit, 3 acres of peaches, 3 acres of pears, 4 acres of apples. Best adapted to all crops. Fences, wire and rail, fair condition. House,  $1\frac{1}{2}$  stories, good condi-

tion. Barn with gambrel roof and basement, extra good hog house. House and barns watered by wells; fields, by springs. Near Lake Ontario. Occupied by owner. Reason for selling, advanced age of owner. Price, \$8,500. Terms, \$2,500 down, balance on long time. Address W. C. Hill, owner, Holley, N. Y.

#### TOWN OF RIDGEWAY

Population 6,538

No. 837.—Farm of 12 acres; located  $2\frac{1}{2}$  miles from Lyndonville P. O. and railway station on line of R., W. & O. R. R.;  $\frac{1}{2}$  mile from school and churches;  $2\frac{1}{2}$  miles from milk station. Nearest village, Medina, population 5,683,  $4\frac{1}{2}$  miles distant, reached by good State road. General surface, level. Nature of soil, gravelly. Acres in timber, 2; acres tillable, 10. Fruit,  $3\frac{1}{2}$  acres bearing apples;  $\frac{3}{4}$  acre of strawberries;  $\frac{3}{4}$  acre of black-raspberries; 15 peach; 8 pear; 20 cherry and 6 English walnut trees. Best adapted to fruit and garden trucking. Fences, good. House, 2 stories, 8 rooms, good condition. Barn, 28x36; other smaller buildings, in good condition. House, barns and fields watered by wells. Occupied by owner. Reason for selling, in other business. Price, \$3,600. Terms, \$1,600 cash, balance on mortgage at 6%. Address Lee I. Wells, owner, Lyndonville, N. Y., or Citizens' State Bank, agents, Lyndonville, N. Y.

No. 838.—Farm of 183 acres; located  $4\frac{1}{2}$  miles from Medina P. O., R. D. 1, and railway station on line of N. Y. C. R. R.;  $\frac{3}{4}$  mile from school;  $\frac{1}{4}$  mile from churches; 4 miles from milk station. Highways, State road. Population of Medina, 5,683. General surface, 83 acres level, balance rolling. Nature of soil, gravelly. Acres in meadow, 25; in pasture, 16; in timber, 25; acres tillable, 140. Fruit, 12 acres of apples; 14 acres of peaches; 2 acres of pears; 1 acre of cherries and plums. Best adapted to fruit and general farming. Fences, wire, good condition. House, 2 stories, 12 rooms, furnace, etc. Outbuildings: barn, 26x36; horse barn, 26x36; packing house, 20x80; scales and other buildings, all in good condition. House and barns watered by windmill; fields, by streams. Occupied by owner. Reason for selling, ill health. Price, \$15,500. Terms, \$6,000 cash, balance on mortgage at 5%. Address Charles James, owner, R. D., Medina, N. Y., or Citizens' State Bank, agents, Lyndonville, N. Y.

No. 839.—Farm of 100 acres; located  $3\frac{1}{2}$  miles from Medina P. O. and railway station on line of N. Y. C. R. R., and B., L. & R. trolley;  $\frac{1}{2}$  mile from school;  $3\frac{1}{4}$  miles from churches and milk station. Highways, good. General surface, level. Nature of soil, gravelly. Acres that can be used as meadow, 18; in natural pasture, 10; in timber, 6; acres tillable, 94. Fruit, 16 acres of apple trees, general varieties, including 100 winter banana, 7 acres of Elberta peaches, 75 sour cherry trees and all kinds of berries for home use. Best adapted to fruit and general crops. Fences, good. House, 2 stories, 11 rooms, good condition. Outbuildings: main barn 30x40, horse barn 20x50, other buildings including 2 story carriage house, good condition. House watered by wells, barns, by wells. Occupied by owner. Reason for selling, ill health. Price, \$14,000. Terms, \$6,000 cash, balance on mortgage at 5%. Address Charles Self, owner, R. F. D. Medina, N. Y., or Citizens' State Bank, agents, Lyndonville, N. Y.

#### TOWN OF YATES

Population 2,156

No. 840.—Farm of 100 acres; located 2 miles from Lyndonville P. O. and railway station on line of R., W. & O. R. R., 2 miles from schools; 2 miles from churches and  $1\frac{1}{2}$  miles from milk station. Highways, good. Nearest village, Medina, population 5,683, 7 miles distant, reached by rail or highway. General surface, level. Nature of soil, sandy loam. Acres that can be used as meadow, 38; in timber, 8. Acres tillable, 90. Fruit, 8 acres of bearing apples, general varieties, 4 acres of bearing Elberta peaches, 50 pear and 25 quince trees, other fruit for home use. Best adapted to fruit, wheat, potatoes and general crops. Fences, fair condition. House, 2 stories, 10 rooms, fair condition. Outbuildings: main barn 30x40, horse barn 30x44, poultry house, hog house, cow stable and garage. House watered by wells, barns by wells and fields by wells. Occupied by owner. Reason for selling, desires a smaller farm. Price, \$9,000. Terms, \$4,000 cash, balance on mortgage at 5%. Address John Volschow, owner, Lyndonville, N. Y., or Citizens' State Bank, agents, Lyndonville, N. Y.

No. 841.—Farm of 72 acres; located  $5\frac{1}{2}$  miles from Lyndonville P. O. and  $1\frac{1}{2}$  miles from railway station at Mil-

lers on line of R., W. & O. R. R.; 30 rods from school; 1½ miles from churches and milk station. Highways, good. Nearest village, Medina, population 5,683, 10 miles distant, reached by highway. General surface, level. Nature of soil, sandy and clay. Acres that can be used as meadow, 13; in natural pasture, 3. Acres tillable, 69. Fruit, 200 bearing apple trees, general varieties, 4 acres of Bartlett and Kiefer pears, bearing, 4 acres of Elberta peaches,

other fruit for family use. Best adapted to fruit and general crops. Fences, fair. House, 2 stories, 12 rooms, good condition. Outbuildings: main barn 32x42, horse barn 16x32 and other buildings. House watered by wells, barns by wells. Occupied by owner. Price, \$10,500. Terms, \$3,000 cash, balance on mortgage at 5%. Address Grant Clark, owner, Lyndonville, N. Y., or Citizens' State Bank, agents, Lyndonville, N. Y.

### OSWEGO COUNTY

Area, 962 square miles. Population, 71,664. Annual precipitation, 41.36 inches. Annual mean temperature, 47.3°. Number of farms, 6,319. County seat, Oswego.

This county is located at the eastern end of Lake Ontario; Oneida Lake and Oneida River forming the southern boundary. It is intersected by the Oswego and Salmon Rivers.

The surface features along Lake Ontario are comparatively level with a soil consisting of a gravelly loam. Farther back in the region drained by the Oswego River the soil is mostly clay loam. The surface is undulating in the eastern part of the county and the soil is a gravelly loam with many scattered beds of muck. In the southern part the surface is rolling, declining to a flat level tract in the region of Oneida Lake, the soil being sandy but fertile. Silurian sandstone, an excellent material for building purposes, constitutes the rock found next to the surface of the soil.

All fruits flourish and the county is noted for its excellent quality of small fruits and apples. During the berry season of strawberries and raspberries, iced berry cars are run daily to New York City, Boston and Philadelphia. Some of the principal crops are corn, 491,706 bushels; oats, 504,314 bushels; buckwheat, 71,394 bushels; potatoes, 997,874 bushels; hay and forage, 166,002 tons. The value of all farm property is \$23,804,151, an increase of 21.5 per cent. during the past ten years. The average price of land only in this county is \$18.27, and the average price of improved land is \$35.97. There are many cheap farms with old orchards that have been planted for fifty and sixty years but have never had any proper treatment that with the application of modern methods of care and marketing would yield abundantly. A notable instance of this has recently occurred. One farm of 100 acres containing an orchard of ten acres, trees planted 54 years, was bought for \$7.50 per acre, and the orchard produced under the first year's cultivation, fertilization, pruning and spraying about \$4,000 worth of apples. The entire farm has been cleared of brush, briars and other growth and set out to orchard.

Domestic animals are reported as follows: Dairy cows, 40,744; horses, 13,529; swine, 13,848; sheep, 6,009; poultry, 251,022; milk production, 20,101,582 gallons. Amount received from the products of 85 milk stations and factories, \$1,888,709.

The county is traversed in various directions by the R., W. & O., N. Y., O. & W., D., L. & W. railroads and by the Oswego Canal together with trolley lines running through the entire length of the county from Syracuse to Oswego. A state normal and training school is located in Oswego and the largest cornstarch factory in the country has its plant in that city, the output being about 33 tons per day. Wheat and buckwheat flour mills are also located there. There are 273 districts schools, well located throughout the county, 58 miles of state and county roads and 1,195 miles of graded and improved highways. There are 66 agricultural organizations in the county, which indicate that the farmers are alert as to the best methods of agriculture.

### TOWN OF ALBION

Population 1,472

No. 842.—Farm of 113 acres; 1½ miles from Altmar P. O. and railway

station on line of R., W. & O. R. R.; 1½ miles from schools and churches. Highways, good. Surface, rolling and level. Soil, rich, stony loam. Acres in meadow, 20; natural pasture, 30; tim-

ber, 25, cherry, hemlock, ash, maple and birch. Acres tillable, 80. Fruit, 20 apple trees. Best adapted to corn, potatoes, oats, rye, apples and small fruits of all kinds. Fences, stone and wire, good condition. House, 28x22, square roof, addition, 24x18, good condition. Outbuildings: barn, 30x40; stable, 40x14; horse barn, 26x36; hen house, 50x14, concrete floor, modern. Watered, house, by well; fields, by creeks and several springs. Lake Ontario, 12 miles and Salmon River, 1½ miles distant. Buildings are in center of farm, surrounded by 23 fine maple trees. Reason for selling, poor health of owner. Price, \$3,500. Terms, cash or part payment. Address Thomas Riley, owner, Altmar, N. Y.

## TOWN OF BOYLSTON

Population 687

No. 843.—Farm of 38 acres; located 8 miles from Lacona P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.; ½ mile from school; 40 rods from churches; 3 miles from butter factory; 3 miles from cheese factory; 8 miles from milk station and 14 miles from condensing plant. Highways, good. Nearest village, Pulaski, population 1,788, 15 miles distant, reached by highway. General surface, level. Altitude, 1,200 feet. Nature of soil, part of it black muck. Acres that can be used as meadow, 20; in natural pasture, 18; some fine timber, second growth. Acres tillable, 25. Fruit, a few apple trees. Best adapted to oats, potatoes and buckwheat. Fences, wire, in good condition. House, 18x24, wing 16x20 and wood shed. Barn 20x30, not very good. House and barns watered by well, fields by creek. Reason for selling, other business. Price, \$500. Terms, \$200 cash, balance on mortgage. Address Belenda Roborge, owner, Adams, N. Y. Owner will rent.

No. 844.—Farm of 145 acres; located 5 miles from Lacona P. O., R. D. No. 3, and railway station on line of R., W. & O. R. R.; ½ mile from school; 4 miles from churches; 2½ miles from butter factory; ½ mile from cheese factory; 5 miles from milk station and 11 miles from condensing plant. Highways, good. General surface, level. Altitude, 800 feet. Nature of soil, gravelly. Acres that can be used as meadow, 75; in natural pasture, 25; in timber, 45, beech, birch, maple and fine sugar bush. Acres

tillable, 90. Fruit 20 apple trees. Best adapted to potatoes, corn, oats, buckwheat and barley. Fences, wire, in good condition. House, 20x26, with wing 16x24 and 14x18, good condition. Outbuildings: barn 42x60, poultry house 16x24, and large tool shed. House watered by well, barns by well, fields by two creeks. Occupied by owner. Reason for selling, ill health and has smaller farm. Price, \$1,600. Address: A. C. Minckler, owner, R. D. No. 3, Lacona, N. Y.

No. 845.—Farm of 86 acres; located 4 miles from Lorraine P. O., R. D. No. 2, and 10 miles from railway station on line of N. Y. C. R. R.; 1 mile from school; 2 miles from churches; 1 mile from cheese factory; 9 miles from milk station and condensing plant. Highways, good. Nearest large village, Adams, population 1,458, 9 miles distant, reached by highway. General surface, level. Altitude, 1,200 feet. Nature of soil, gravelly loam. Acres that can be used as meadow, 30; in natural pasture, 30; in timber, 28, beech, birch and maple. Acres tillable, 40. Fruit, a few apple trees. Best adapted to oats, potatoes, corn and buckwheat. Fences, wire, good condition. House, 18x24, with wings 16x24 and 14x24. Outbuildings: basement barn 30x40, hog pen 12x14, good condition. House and barns watered by well, fields by stream. Occupied by owner. Reason for selling, has another farm. Price, \$600. Terms, \$300 cash, balance on mortgage. Address Myron Nemier, owner, Lacona, N. Y., R. D. No. 2.

## TOWN OF CONSTANTIA

Population 2,023

No. 846.—Farm of 200 acres; 1¼ miles from Bernhards Bay P. O., R. D. 1, and railway station on line of N. Y., O. & W. R. R.; ¼ mile from school, churches and milk station. Highways, good. Nearest village, Cleveland, population 687, 3 miles distant, reached by highway. Surface, level. Soil, sandy. Acres in meadow, 20; in natural pasture, 60; in timber, 100, second growth of birch, maple, hemlock, spruce and pine. Acres tillable, 100. Few apple trees. 2½ acres of strawberries. Best adapted to strawberries. Fences, barbed wire, in good condition. 12-room house, new slate roof, in good condition. Barns, 40x65, 26x36, 24x32, in fine

condition; smoke house and hen house; also new hen house, 13x63. Spring water in house; barns watered by wells; good stream flows through this farm.  $1\frac{1}{4}$  miles from Oneida Lake. Occupied by owner. Reason for selling, old age. Price \$4,500. Terms,  $\frac{1}{2}$  cash, easy payments for balance. Address Herbert Cook, owner, Bernhards Bay, N. Y., R. D. 1.

No. 847.—Farm of 179 acres; located 2 miles from Constantia P. O., R. D. 1, and railway station on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school and churches; 2 miles from butter and cheese factory and milk station. Highway, good, level. General surface, level. Nature of soil, sandy loam. Acres in meadow, 100; in pasture, 50. Acres tillable, 125. Fruit, apples for family use. Best adapted to potatoes, rye, wheat and berries. Fences, good. House, 12 rooms, fine cellar, furnace heat. Barn for 20 cows, 6 horses, ice house and hen house. House watered by well, barn by well, fields by stream. Farm is located on Oneida Lake. Reason for selling, ill health of owner. Price, \$6,000. Terms, \$4,000 cash, \$200 per year. Address James Gallagher, owner, Cleveland, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

No. 848.—Farm of 18 acres; located in the incorporated village of Constantia on line of N. Y., O. & W. R. R., near high school and churches. Highways, good. Nature of soil, loam. Acres in meadow, 16; in pasture, 2. Acres tillable, all. Fruit, 20 apple trees. Best adapted to potatoes, corn and oats. Fences, good. House, 10 rooms, good cellar. Barn for 3 cows, 2 box stalls. House and barns piped with city water, fields watered by stream. Occupied by owner. Reason for selling, poor health. Price, \$2,200. Terms, cash. Address Mrs. Louis Riter, owner, Cleveland, N. Y., or Bernard Delahunt, agent, Cleveland, N. Y.

#### TOWN OF GRANBY

Population 2,022

No. 849.—Farm of 118 acres; located 1 mile from South Granby P. O. and railway station on line of D., L. & W. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 1 mile from milk station; 4 miles from condensing plant. Highways, good. General surface, level. Nature of soil, loam. Acres in meadow, 25. Acres tillable, all. Fruit, for family use. Best adapted to corn,

wheat, oats, potatoes and tobacco. Fences, good, American wire. House, 8 rooms, painted, good condition. Outbuildings: basement barn, 30x70, stanchions for 20 cows, silo, 14x32, wagon house, hen house, tobacco shed, hog house, ice house and milk house. House watered by well, water piped into barn, fields watered by stream. Occupied by owner. Reason for selling, owner has smaller farm. Price, \$7,500. Terms, \$3,500 cash, balance easy. Good potato farm producing 200 bu. per acre. Address A. H. Seeley, owner, R. D., South Granby, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

No. 850.—Farm of 45 acres; located 3 miles from Fulton P. O., R. D. 9, and railway station on line of D., L. & W. and N. Y. C. R. R.;  $\frac{1}{4}$  mile from school and churches. Milk collected at door. Highway, State road. General surface, level. Nature of soil, gravelly loam. Timber enough for fire wood. Acres tillable, 40. Fruit, 200 apple, 75 pear and 50 cherry trees. Best adapted to fruit, beans, potatoes, oats, hay and berries. Fences, mostly American wire. House, 9 rooms, 2 stories, frame. Outbuildings: barn 28x40, basement; silo, 14x30, barn, 30x35, shed, 28x40. House watered by well; barns, water piped; fields, by stream. Occupied by owner. Reason for selling, has larger farm. Price, \$3,000. Terms, \$1,000 down, balance to suit purchaser. Eight acres good muck land. Address Wm. Crockford, owner, R. D., Fulton, N. Y., or Whitaker & Bogardus, agents, Fulton, N. Y.

No. 851.—Farm of 119 acres; located  $4\frac{1}{2}$  miles from Fulton P. O., R. D., and railway station on line of N. Y. C., N. Y., O. & W. and R., W. & O. R. R.;  $\frac{1}{2}$  mile from school, churches and butter factory. Highway, State road. General surface of farm, level. Nature of soil, loam. Acres in meadow, 24; in pasture, 25; in timber, 7, virgin and second growth. Acres tillable, 80. Fruit, for family use. House, 11 rooms, 2 stories, frame, bath, acetylene gas, furnace heat. Outbuildings: barn 40x60, concrete basement, stanchions for 22 cows, 5 single stalls, 2 box stalls, silo 16x40, all buildings painted and in good condition. House and barns piped with water. Fields watered by stream. Occupied by owner. Reason for selling, has other business. Price, \$11,000. Terms, part cash. Price includes 4 horses, 17 head of stock and large line of farming

tools, which includes everything necessary to work a farm of this size. Address Milton Terpening, owner, R. D., Fulton, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

#### TOWN OF ORWELL

Population 929

No. 852.—Farm of 167 acres; located 5 miles from Altmar P. O., R. D. 4, and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school and churches; 1 mile from cheese factory; 4 miles from milk station. General surface, rolling. Altitude, 1,000 feet. Nature of soil, clay subsoil. Acres in meadow, 40; in pasture, 100; in timber, 27, beech, maple and ash. Acres tillable, 140. Fruit, 60 apple trees. Best adapted to hay, oats, corn and potatoes. Fences, wire, good. House, 8 rooms, good condition. Barn, 60x100, fair condition. House watered by well, barn by spring, fields by creek. Lease just expired, wish to sell before releasing. Reason for selling, to settle estate. Price, \$2,000. Terms,  $\frac{1}{2}$  cash, 6% on mortgage. Address E. G. Field, owner, Altmar, N. Y.

No. 853.—Farm of 173 acres, located  $4\frac{1}{2}$  miles from Richland P. O., R. D. No. 2 and railway station at Richland on line of Rome, Watertown and Ogdensburg R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles, from churches;  $1\frac{1}{2}$  miles, from cheese factory. Highways, State road. Nearest village, Orwell, population 450,  $1\frac{1}{2}$  miles distant. General surface, hilly, rolling and some level. Nature of soil, stony, loam and sand. Acres in meadow, 40; in pasture, 80; in timber, 36, sugar maple, 2d growth. Acres tillable, 120. Fruit, apples for home use. Best adapted to corn, oats and grains. House,  $1\frac{1}{2}$  stories, with wing, painted, in good condition. Outbuildings: cow barn, 32x52, stone wall and concrete floors, hog house, new, 16x30, poultry house and granary, horse barn, 30x40, all in good condition. House watered by well, barns and fields by creek. Occupied by tenant. Leased annually with rights to sell at any time. Reason for selling, age of owner. Price, \$3,500. Terms, \$1,000 down. Address Albert Stearns Barker, owner, Orwell, N. Y. Owner will rent.

No. 854.—Farm of 156 acres, located 5 miles from Richland P. O., R. D. No. 2 and railway station on line of Rome, Watertown and Ogdensburg R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches;  $2\frac{1}{2}$  miles from butter and cheese fac-

tory. Highways, State road. Nearest village, Orwell, population 450, 2 miles distant, reached by highway. General surface of farm, mostly level. Acres in meadow, 110; in pasture, 75, in timber, sugar bush. Fruit, 25 trees, assorted. Best adapted to hay and grain. Fences, stone wall and barbed wire. House, 2 stories, painted, in good condition. Outbuildings: cow barn 32x80, concrete wall and floor, barn No. 2, 30x60, new. House watered by well, barns by spring and running water, fields by springs. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,000. Terms, \$1,000 down, balance on mortgage. Address Albert S. Barker, owner, Orwell, N. Y. Owner will rent.

No. 855.—Farm of 172 acres, located 2 miles from Orwell P. O., R. D.; 5 miles from railway station at Richland on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Highways, State and county roads. General surface, hilly. Nature of soil, sandy. Acres in meadow, 34; in pasture, 85; in timber, 30. Acres tillable, 80. Fruit, 14 trees. Best adapted to corn, potatoes, beans and buckwheat. Fences, stone wall and wire. House,  $1\frac{1}{2}$  stories and wing, painted. Outbuildings: barn, 30x36, 18-foot posts. Cow barn, 30x52, basement, concrete floor, hen house, hog house and corn house. Occupied by tenant. Reason for selling, poor health and old age. Price, \$4,000. Terms, \$1,000 down, mortgage on balance. Will rent on shares or cash or with option to buy. Address Albert S. Barker, owner, Orwell, N. Y.

#### TOWN OF PALERMO

Population 1,255

No. 856.—Farm of 99 acres, located 2 miles from Palermo P. O., R. D.; 7 miles from Fulton on lines of N. Y. C., N. Y., O. & W. and R., W. & O. R. Rs.;  $\frac{1}{2}$  mile from school; 1 mile from churches. Milk collected at door. Highways, good. General surface, rolling. Nature of soil, gravelly and heavy loam. Acres in meadow, 16; in timber, 30, virgin and second growth. Fruit, 100 apple trees, Baldwins, Greenings and Spies, 60 pear, plum and cherry trees. Best adapted to hay, grain and fruit. Fences, good. House, 11 rooms, 2 stories. Outbuildings: basement barn, 50x60, barn, 25x25, good condition. House watered by well, barns by spring, fields by spring. Occupied by owner. Reason for selling, just purchased another farm.

Price, \$3,900. Terms, \$1,000 cash, balance at 6% mortgage for 4 years. For quick sale will include all personal property consisting of 3 horses, 5 cows, 60 hens and all tools. Address J. C. Bicknell, owner, Palermo, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

No. 857.— Farm of 40½ acres, located 5 miles from Fulton P. O., R. D. 4 and railway station on line of N. Y. C., D., L. & W. and N. Y., O. & W. R. Rs.; 5 rods from school; 1½ miles from churches. Milk collected at door. General surface, rolling. Nature of soil, loam; 9 acres in timber, second growth. Acres tillable, 30. Fruit, 25 apple trees, small fruit for family use. Best adapted to hay, grain and potatoes. Fences, fair. House, 7 rooms, 2 stories, frame, in fair condition. Barn, 20x30, hog house and hen house. House and barn watered by well, fields by stream. Occupied by owner. Reason for selling, has other business. Price, \$1,500. Terms, part cash, balance to suit purchaser. New State road just completed. Address Percy Pringle, owner, R. D., Fulton, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

## TOWN OF PARISH

Population 1,311

No. 858.— Farm of 150 acres, located 7 miles from Parish P. O., R. D., and railway station on line of R., W. & O. R. R.; ½ mile from school; 2 miles from churches; 2 miles from butter and cheese factory. Highways, good. General surface of farm, part rolling, part level. Nature of soil, gravel. Acres in meadow, 50; in pasture, 50; acres tillable, 80. Fruit, 75 trees, apples, cherries, crab apples and pears. Best adapted to corn, hay, buckwheat and potatoes. Fences, barbed wire, good. House, 11 rooms, large and in good condition. Out-buildings: barn, 30x40 with concrete floor and basement, hay barn, 34x44, hen house 12x20, concrete floor. House watered by well. Barns by creek, fields by creek. Reason for selling, owner not able to run it. Price, \$4,000. Terms, half down, balance easy. Address William Woolworth, owner, Parish, N. Y.

No. 859.— Farm of 250 acres, located 2 miles from Parish P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; ½ mile from school; 2 miles from churches; 2 miles from butter factory; 2 miles from cheese factory and milk station. Highways, stone road. General

surface, level. Acres that can be used as meadow, 100; in natural pasture, 150; in timber, 80, all kinds, second growth. Acres tillable, 125. Small house. Best adapted to general crops. Fences, wire, good condition. House watered by well, fields by stream and springs. Occupied by owner. Reason for selling, other business. Price, \$4,000. Terms, one-half cash, balance on mortgage. Address Harrison Stevens, owner, Parish, N. Y.

No. 860.— Farm of 100 acres, located 6 miles from Parish P. O., R. D., and railway station on line of N. Y. C. R. R.; ¼ mile from school; 2 miles from churches; 2 miles from butter factory; 2 miles from cheese factory and 6 miles from milk station. General surface, mostly flat. Nature of soil, sand and gravel. Acres that can be used as meadow, 50; in natural pasture, 30; in timber, 20; maple, beech and hemlock. Acres tillable, 50. Fruit, apple trees. Best adapted to general crops. Fences, fair. Large old fashioned house. Barns, fair condition. House and barns watered by well, fields by stream and spring. Occupied by owner. Reason for selling, to settle an estate. Price, \$2,500. Terms, \$1,250 cash, balance on mortgage. Address Joseph Heistman, owner, Parish, N. Y.

No. 861.— Farm of 20 acres, located 2½ miles from Parish P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; ¼ mile from school; 2½ miles from church; 2 miles from butter factory; 2 miles from cheese factory and 2½ miles from milk station. Highways, level. General surface, level. Nature of soil, gravelly. Most of it can be used as meadow. Fruit, 15 apple trees. Best adapted to general farm crops. Fences, poor condition. House, medium size, poor condition. Barn, poor condition. House and barn watered by well. Occupied by owner. Reason for selling, to settle an estate. Price, \$600. Terms, cash. Address Charles Barnes, owner, Parish, N. Y.

No. 862.— Farm of 97 acres, located 6 miles from Parish P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.; ½ mile from school; 2½ miles from churches; 2½ miles from butter factory; 2½ miles from cheese factory and 6 miles from milk station. Nearest village, West Amboy, population 736, 2½ miles distant, reached by highway. General surface, rolling. Nature of soil, gravelly. Acres that can be

used as meadow, 60; in natural pasture, 67; in timber, 30, all kinds. Acres tillable, 60. Fruit, some apples. Best adapted to corn, oats and potatoes. Fences, stone wall and wire. House, in poor condition. No outbuildings. Reason for selling, to settle an estate. Price, \$1,000. Terms, \$300 cash, balance on mortgage. A good quality of saw timber, elm, birch, hemlock, cedar and maple. Address Mary E. Harter, owner, Parish, N. Y.

No. 863.—Farm of 98 acres, located 5 miles from Parish P. O., R. D. and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from church; 3 miles from butter factory; 3 miles from cheese factory and 5 miles from milk station. Highways, rolling. General surface, rolling. Nature of soil, gravelly. Acres that can be used as meadow, 50; in natural pasture, 48. Fruit, few apple trees. Best adapted to corn, potatoes and buckwheat. Fences, poor condition. House, old. Barn, old. House and barns watered by well, fields by pond and stream. Reason for selling, old age. Price, \$700. Terms, part cash, balance on mortgage. Address Lewis Owen, owner, Parish, N. Y.

No. 864.—Farm of 76 acres, located  $6\frac{1}{2}$  miles from Parish P. O., R. D.;  $5\frac{1}{2}$  miles from railway station at Altmar on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches; 3 miles from butter factory; 3 miles from cheese factory;  $5\frac{1}{2}$  miles from milk station and condensing plant. Highways, hilly. General surface, hilly. Nature of soil, gravel and muck. Acres that can be used as meadow, 30; in natural pasture, 46; some small timber. Acres tillable, 40. Fruit, a few apple trees. Best adapted to all kinds of crops. Fences, poor. House of medium size, poor condition. Barn, poor condition. House and barn watered by spring, fields by stream. Occupied by tenant. Reason for selling, to settle an estate. Price, \$1,000. Terms, one-half cash, balance on mortgage. Address Aaron House, owner, Hamilton, N. Y.

#### TOWN OF REDFIELD

Population 803

No. 865.—Farm of 130 acres, located 5 miles from Redfield P. O., R. D. 1; 9 miles from railway station at Richland on line of R., W. & O. R. R.;  $1\frac{1}{2}$  miles from school and cheese factory;  $2\frac{1}{2}$  miles from Methodist church. Surface of farm, mostly smooth, some hills.

Altitude, about 1,150 feet. Soil, gravelly. Acres in meadow, 24; in natural pasture, 80; in timber, 26, hemlock and hardwood. Acres tillable, 60. Best adapted to corn, potatoes and oats. Fences in poor condition. House, small, poor condition. Barn in poor condition. Occupied by owner. Price \$500. Address Henry Brown, owner, Watertown, N. Y. Owner will rent.

No. 866.—Farm of 78 acres, located 3 miles from Redfield P. O., R. D. 3;  $8\frac{1}{2}$  miles from railway station at Williamstown on line of R., W. & O. R. R.;  $1\frac{1}{2}$  miles from school; 3 miles from churches;  $\frac{1}{2}$  mile from cheese factory; 9 miles from milk station. Surface of farm, rolling. Altitude, 1,200 feet. Soil, gravelly. Acres in meadow, 10; in natural pasture, 40; in timber, 30, hard wood. Acres tillable, 24. Fruit, apples and pears. Best adapted to corn and oats. Fences, wire, good. Occupied by owner. Reason for selling, owner has too much land. Price, \$500. Terms,  $\frac{1}{2}$  cash. Address Walter Dowling, owner, Williamstown, N. Y., R. D. 3.

No. 867.—Farm of 238 acres, 10 miles from Williamstown P. O., R. D. No. 3, and railway station on line of N. Y. C. R. R.; 2 miles from school and churches;  $1\frac{1}{4}$  miles from cheese factory. Nearest village, Redfield, 3 miles distant, reached by State road. General surface, level. Altitude, 1,200 feet. Nature of soil, gravelly loam. Acres in meadow, 40; in pasture, 175; in timber, 63, second growth. Acres tillable, 200. Best adapted to potatoes, corn, oats and rye. Fences, wire, good condition. Two houses,  $1\frac{1}{2}$  stories, good condition. Two barns, one 46x50, one 42x60, good condition. House watered by wells, barns by running water, fields by springs. Salmon river,  $\frac{1}{2}$  mile distant. Occupied by owner. Reason for selling, wishes to retire. Price \$7,000. Terms \$3,000 cash, balance to suit purchaser. Address Ira Fox, owner, Williamstown, N. Y.

No. 868.—Farm of 100 acres, located 3 miles from P. O., R. D. No. 3, and 10 miles from railway station at Williamstown on line N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school; 3 miles from churches. Highways, good. Nearest village, Redfield, 10 miles distant. General surface of farm, level. Altitude, 1,175 feet. Acres that can be used as meadow, 30; in natural pasture, 70; in timber, 20, second growth. Acres tillable, 70. Best adapted to potatoes, oats and corn.

Fences, wire, good condition. Salmon river runs through farm, the best of trout fishing. Occupied by owner. Reason for selling, old age. Price, \$3,000. Terms, \$1,000 cash, balance easy. Address W. J. Dowhig, owner, Williams-town, N. Y.

## TOWN OF RICHLAND

Population 3,791

No. 869.—Farm of 80 acres, located 2 miles from Pulaski P. O., R. D. No. 4, and railway station on line of N. Y. C. R. R.; 80 rods from school; 2 miles from high school and churches; 2 miles from butter and cheese factory, milk station and condensing plant. Highways, State road. Population of Pulaski 1,788, reached by highway. General surface, level. Altitude, 750 feet. Nature of soil, gravel loam. Acres in meadow, 75; in timber, 5; wood for home use. Acres tillable, 75; fruit, 60 apple, 2 pear, 7 plum, and 7 cherry trees. Best adapted to hay, grain, potatoes and corn. Fences, wire. House, 1½ stories, 12 rooms, good condition. Outbuildings: barn 40x60, concrete floors in basement, hog house and granary. House and barns watered by well; fields by brook. Occupied by owner. Reason for selling, has other farms. Price, \$5,000. Terms, \$2,000 down, balance, \$200 annually and interest. Price includes 10 cows, tools and crops. Address Harriet Wright, owner, Pulaski, N. Y., or W. D. Streeter, broker, Richland, N. Y.

No. 870.—Farm of 110 acres, located ½ mile from Daysville P. O., and railway station on line of N. Y. C. R. R.; ¾ mile from school; 80 rods from church; ½ mile from cheese factory and milk station. Highways, good. Nearest city, Oswego, population 23,368, 20 miles distant, reached by rail. General surface, fairly level. Altitude, 700 feet. Nature of soil, clay loam. Acres that can be used as meadow, 60; in natural pasture, 40; in timber, 10. Acres tillable, 75. Fruit, 20 apple trees and some grape vines. Best adapted to hay, corn, potatoes and grain. Fences, wire, in fair condition. House, 1½ stories, 12 rooms in good condition. Outbuildings: basement barn 38x60, barn 30x40, barn 24x40. House and barns watered by well, fields by brooks. Lake Ontario, 2 miles distant. Occupied by tenant. Reason for selling, ill health. Price, \$7,000. Terms, \$2,500 cash, balance \$300 yearly

and interest. Price includes stock, farm tools and crops. Address J. E. Mathewson, owner, Fernwood, N. Y.

No. 871.—Farm of 200 acres, located 1 mile from Fernwood P. O., and railway station on line of N. Y. C. R. R.; ¼ mile from school; 1 mile from churches; 1 mile from butter and cheese factory and milk station. Nearest village, Pulaski, population 1,788, 5 miles distant, reached by rail and good highway. General surface, level, some slightly rolling. Nature of soil, gravel loam. Acres in meadow, 100; in pasture, 80; in timber, 20, beech, birch and maple. Acres tillable, 180. Fruit, 80 apple trees, mostly winter varieties, and other fruit. Best adapted to hay, corn, oats, buckwheat, barley, beans and potatoes. Fences, mostly wire, fair condition. House, 2 stories, 10 rooms, also tenant house, both in good condition. Outbuildings: barn No. 1, 40x100; stanchions for 35 cows, barn No. 2, 30x60, corn house, granary, poultry house, all in good condition. House watered by well, barns and fields by brook. Occupied by tenant. Price, \$11,000. Terms, \$3,500 down, balance at 5%. Price includes 25 cows. Address Geo. H. Edick, owner, Pulaski, N. Y., or W. D. Streeter, broker, Richland, N. Y.

No. 872.—Farm of 103 acres, located 4½ miles from Pulaski P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; 4½ miles from school; ¼ mile from high school; 2 miles from churches; 4½ miles from butter factory; 2 miles from cheese factory; 4½ miles from milk station and condensing plant. General surface, rolling. Altitude, 700 feet. Nature of soil, gravel loam. Acres that can be used as meadow, 60; in natural pasture, 43; in timber, 4. Acres tillable, 60. Fruit, 200 apple, 25 pear, 10 plum, 25 cherry, and 1 peach tree. Best adapted to fruit, hay, grain and potatoes. Fences, mostly wire, fair condition. Two-story house, 10 rooms, painted and in good condition. Outbuildings: large barn, poultry house and hog house. House and barns watered by well, fields by brook. Lake Ontario, ¾ mile distant. Occupied by owner. Reason for selling, to settle an estate. Price, \$4,500. Terms, \$2,000 cash, balance on mortgage. This farm has a sugar orchard of 100 trees. Address Wm. E. Hilton, owner, Pulaski, N. Y., or W. D. Streeter, broker, Richland, N. Y.

## TOWN OF SANDY CREEK

Population 2,106

No. 873.—Farm of 186 acres, located 2 miles from Pulaski P. O., R. D. 4, and railway station, school next to farm; 2 miles from Protestant church, butter factory, cheese factory, milk station and milk condensing plant. Highways, good. Nearest city, Syracuse, population 137,249, 20 miles distant, reached by rail highway. Surface of farm, level. Soil, good, rich. Acres in meadow, 70; in natural pasture, 70; in timber, 25, mostly hard wood. Acres tillable, 160. Best adapted to hay. Fences in good condition. House, 15 rooms, new and well built. Outbuildings: carriage house, ice house, ash house and other outbuildings, in good condition. Watered, house, by well; barns, by running water. This farm is 3 miles from Lake Ontario. Occupied by owner. Reason for selling, ill health. For price and terms, address Mrs. Ella Stewart Clark, owner, Pulaski, N. Y.

No. 874.—Farm of 160 acres, located 1½ miles from Sandy Creek P. O.; 2 miles from railway station at Lacona on line of R., W. & O. Ry; 1½ miles from school; 1 mile from church; 2 miles from butter factory, cheese factory and milk station. Highways, good. Surface of farm, rolling. Soil, loam. Acres in meadow, 90; in natural pasture, 60; in timber, 18, beech, birch, maple and hemlock. Acres tillable, 120. Fruit, apples, pears, plums and grapes. Best adapted to corn, oats and hay. Fences in fair condition. Large house, good condition. Outbuildings: barn, 50x34, underground stable; barn, 30x40; hen house, 60x24, fair condition. Watered, house and barns, by wells; fields, by spring brook. This farm is 3 miles from Lake Ontario. Occupied by tenant. Reason for selling, owner desires to retire from business. Price, \$6,000. Terms \$2,000 cash, balance to suit purchaser. Address Gilford Hadley, owner, Sandy Creek, N. Y.

## TOWN OF SCRIBA

Population 2,199

No. 875.—Farm of 111 acres; 5 miles from Oswego. Five acres timber. About 350 apple and 250 pear trees, plums and other fruit. House, 30x40, with 2 wings, in good condition. Barns, 30x60 and 20x38; sheds and other buildings; all good; also tenant house. Well watered and well fenced. Price, \$55 per acre. Terms, easy. Address J. H. Wor-

den, owner, Oswego, N. Y., R. D. 2. Owner will rent.

No. 876.—Farm of 180 acres, located 6 miles from Oswego P. O., R. D.; 1¼ miles from railway station at North Scriba on line of R., W. & O. R. R.; 1 mile from school; 1¼ miles from churches. Milk collected at door. General surface, rolling. Nature of soil, gravelly and heavy loam. Acres in meadow, 25; in pasture, 20; in timber, 35, second growth. Acres tillable, 125. Fruit, 500 apple trees, set 40 feet apart. Baldwins and Greenings, 220 pear trees, cherries, etc. Best adapted to hay, grain, oats, potatoes and fruit. Fences, good. House, 10 rooms, 2 stories. Outbuildings: barn, 72x36, barn 24x72, hen house and garage. House and barns watered by wells. Fields by stream. Occupied by owner. Reason for selling, retiring. Price, \$9,500. Terms, \$4,000 cash, balance to suit purchaser. Price includes 25 head of cattle, 1 horse and large line of farm tools. Address Burton Jones, owner, R. D., Oswego, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

## TOWN OF VOLNEY

Population 2,407

No. 877.—Farm of 28½ acres, located 5 miles from New Haven (P. O. Mexico, R. D. 4) and railway station on line of R., W. & O. R. R. Few rods from school and churches. Cheese factory on farm. Nature of highways, good. Nearest city, Fulton, population 10,486, 7 miles distant, reached by highway. General surface, sloping. Nature of soil, gravelly loam. Acres in meadow, 20; acres tillable, all. Fruit, 60 apple trees, 1 peach, 12 pears, ¼ acre of raspberries. Fences, fair condition. House, 8 rooms, good cellar. Outbuildings: barn 33x48, basement, hen house 16x24. House watered by spring in cellar; barns, by well; fields, by stream. Occupied by owner. Reason for selling, old age. Price, \$1,600. Terms, \$750 cash, balance on mortgage at 6%. Cheese factory is included in price; present owner made 21,000 pounds of cheese in 1913. Address G. S. Cole, owner, R. D. No. 4, Mexico, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

No. 878.—Farm of 50 acres, located 2½ miles from Fulton P. O., R. D. 3 and railway station on lines of N. Y. C. and D., L. & W. R. Rs.; ½ mile from school; 1 mile from churches. Milk collected at door; 2½ miles to butter fac-

tory. Nature of highway, State road. General surface, rolling enough to drain. Nature of soil, gravelly loam. Timber enough for farm use; acres tillable, all. Fruit, sufficient for family use. Best adapted to hay, grain, oats and potatoes. Fences, good. House, 2 stories, frame, 8 rooms, furnace heat. Outbuildings: barn, 36x36, concrete basement; silo, 14x32; barn, 30x40; hen house and corn house. House and barns watered by well, fields by stream. Occupied by owner. Reason for selling, wants large farm. Price, \$3,000. Terms, \$1,000 cash, balance to suit purchaser. Address A. H. Seeley, owner, R. D. No. 3, Fulton, N. Y., or Whitaker & Bogardus, Inc., agents, Fulton, N. Y.

## TOWN OF WEST MONROE

Population 915

No. 879.—Farm of 87 acres, located 2½ miles from West Monroe P. O. and

railway station on line of N. Y., O. & W. R. R.; 1 mile from school; 2½ miles from Protestant church, butter factory, cheese factory and milk station. Highways, good. Surface of farm, rolling. Soil, sandy and clay loam. Acres in meadow, 50; in natural pasture, 25; in timber, 12, second growth. Acres tillable, about 75. Fruit, 25 apple, 1 cherry and 2 plum trees, also 1 grape vine. Best adapted to hay, oats, corn, potatoes, wheat and buckwheat. Fences, wire, good. House, upright, 18x24, with wing, 15x20. Outbuildings: barn, 30x40; barn, 40x60; wagon house, 13x24; hog house, 13x16. Watered, house and barn, by well; fields, by spring. This farm is 1½ miles from Oneida lake. Occupied by owner. Reason for selling, ill health of owner. Price, \$4,500. Terms \$1,000 down, balance on easy terms. Address John E. Lord, owner, West Monroe, N. Y. Owner will rent.

## OTSEGO COUNTY

Area, 956 square miles. Population, 47,216. Annual precipitation, 46.52 inches. Annual mean temperature, 46.3°. Number of farms, 5,346. County seat, Coopers-town.

This county is situated in the southeastern part of the state. It is drained by the Susquehanna River which has its source in Otsego Lake, by Charlotte River and Butternut and Schenectady Creeks. Like all the counties of the state it has an abundance of clear, pure water.

The surface is diversified with high broad ridges and long deep valleys, which are generally very wide. Woodlands of oak, sugar maple, ash, beech and elm, are well scattered through the county and cover nearly one-fourth of its area, namely, 143,817 acres. Sandstone and limestone underlie a part of the county, furnishing excellent building material. The soil in the northern part is a gravelly loam while in the eastern part clay loam predominates. In the southern section a soil is found consisting of a red shale formation. In the other parts of the county the soil of the ridges consists of gravelly loam, while the valleys are covered with a dark clay loam. As a whole the county is especially adapted to pasturage and all kinds of farming. Otsego County produces more hops than any other county in the state, the yield in 1910 being 2,287,383 pounds. Some of the other leading products are corn, 308,096 bushels; oats, 827,095 bushels; buckwheat, 188,855 bushels; potatoes, 1,059,120 bushels; hay and forage, 254,991 tons. The valuation of all farm property is \$26,018,419, an increase of 21 per cent. in the last decade. Domestic animals are reported as follows: Dairy cows, 52,920; horses, 13,258; swine, 14,102; sheep, 10,108; poultry, 303,901; production of milk, 28,047,600 gallons; this with the products of 75 milk stations and factories showed receipts of \$2,796,808. The transportation facilities of the county are excellent; Richfield Springs is popular as a health resort, the springs having great medicinal value. A state normal school is located at Oneonta. There are 296 district schools in the county, 25 agricultural organizations, 78 miles of state and county roads and 2,078 miles of improved highways.

## TOWN OF BURLINGTON

Population 1,108

No. 880.—Farm of 137 acres, 1 mile from Burlington Flats P. O., R. D. 1; 5 miles from railway station at Edmes-

ton on line of O. & W. R. R.; 1 mile from school, Baptist and Methodist churches and cheese factory; 5 miles from condensing plant. State road. Nearest city, Utica, population, 74,419, 28 miles distant, reached by rail or trol-

ley. Surface of farm, good. Altitude, 1,240 feet. Soil, good. Acres in meadow, 60; in natural pasture, 60; in timber, 17, beech, maple and hemlock. Fruit, 25 apple trees. Best adapted to corn, oats and potatoes. Fences, mostly barbed wire. House, large and good. Barns: cow barn, 30x60, in good condition; horse barn and wagon house combined; large hen house; hog house and store house. Watered, house, by well, soft water; barns, by creek nearby; fields, by creek and springs. Nine miles from Schuyler Lake. Desirable location, healthful locality. Occupied by tenant. Reason for selling, poor health of owner. Price, \$4,500. Terms,  $\frac{1}{2}$  cash. Address F. W. Towne, owner, Burlington Flats, N. Y. Owner will rent.

No. 881.—Farm of 30 acres, located 2 miles from Burlington Flats P. O., R. D. and 7 miles from railway station at Edmeston on line of Ontario and Western R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches;  $\frac{1}{4}$  mile from butter and cheese factory; 2 miles from milk station and condensing plant. Population of Burlington Flats about 300, reached by State road. General surface, level. Altitude, 1,300 feet. Nature of soil, river bottom. Acres in meadow, 30; acres tillable, 30. Best adapted to hay, corn, potatoes and alfalfa. Fences, wire. House, 2 stories, 12 rooms, good condition. Barn 26x30, another 18x28, all in good condition. House and barns watered by wells, fields by creek. Summit Lake,  $\frac{1}{2}$  mile distant. Occupied by tenant, possession given at any time. Reason for selling, owner in other business. Price \$2,000. Terms \$500 down. Address Edward Mayne, owner, Burlington Flats, N. Y.

No. 882.—Farm of 86 acres, located  $1\frac{1}{2}$  miles from Burlington Flats, P. O.;  $6\frac{1}{2}$  miles from railway station at Edmeston on line of O. & W. R. R.;  $1\frac{1}{2}$  miles from school;  $\frac{1}{2}$  mile from churches;  $1\frac{1}{2}$  miles from butter factory;  $1\frac{1}{2}$  miles from cheese factory;  $1\frac{1}{2}$  miles from milk station and  $6\frac{1}{2}$  miles from Borden's condensing plant. Highways, good. General surface, rolling. Altitude, 1,300 feet. Nature of soil, rich loam. Acres in meadow, 35; in natural pasture, 35; in timber, 16, hardwood, beech and maple. Acres tillable, 70. Fruit, all kinds, of different varieties. Best adapted to all crops. Fences, nearly all wire. House, good size, in good condition. Outbuildings: barn 30x40, one 26x30, store house 20x26, poultry house

12x20. House watered by never failing spring, barns, by running water and fields, by spring and creek. Reason for selling, other business. Price, \$2,800. Terms \$1,400 cash, balance on mortgage. Address John J. Doran, owner, Burlington Flats, N. Y.

#### TOWN OF BUTTERNUTS

Population 1,453

No. 883.—Farm of 137 acres; 3 miles from Mt. Upton P. O. and railway station on line of O. & W. R. R.; 1 mile from school; 3 miles from churches; 3 miles from Borden's condensary. Highways,  $\frac{1}{2}$  mile hilly, remainder of valley grade, good. Nearest large town, Sidney, population 2,507, distant 9 miles, reached by highway and rail; nearest villages, Mt. Upton, 3 miles, and Gilbertsville, 4 miles distant. Occupied by owner. Surface, about 10 acres hilly, balance, smooth and rolling. Soil, red shale, good. Acres in meadow, 50; in pasture, 60; in timber, 27; about 10,000 feet of hardwood and about 25,000 feet of hemlock; acres tillable, about 80. Fruit, about 100 apple and 15 pear trees, orchard in good bearing condition and young. Best adapted to hay, oats, millet, corn, potatoes, etc. Fences, mostly barbed wire, good. House, 24x28, fair condition. Barns: one, 46x80, new; wagon house, 26x30, fair; granary and hennerly, fair. Watered, house, by well and cistern; barns, by pond; fields, by spring and brooks. Unadilla river 3 miles, and Butternut creek 1 mile distant. Mail every day by milk teams. Finest of maple shade around house. Young tract of pine growing. Meadows picked of stones, upland smooth. Reason for selling, owner cannot work. Price, \$4,000. Terms, part of price could be arranged to remain on place. Address J. A. Musson, owner, Mt. Upton, N. Y.

No. 884.—Farm of 136 $\frac{1}{2}$  acres, located 3 miles from South New Berlin P. O., R. D. No. 1 and railway station on line of Ontario & Western R. R.;  $\frac{1}{4}$  mile from school and churches;  $3\frac{1}{2}$  miles from butter factory; 3 miles from milk station. Nearest large village, Norwich, 11 miles distant, population 7,422, reached by rail or good dirt road. Nature of soil, mostly red. General surface, level, some rolling. Acres in meadow, 45; in pasture, 60; in timber, 25, variety. Fruit, 250 trees, all kinds of apples. Best adapted to general farming. Fences, mostly wire, some rail and stone. House, stone, two stor-

ies, 44x34. Outbuildings: 2 cow barns, 130x40; 50x25; 1 summer milking stable, 1 horse barn 45x35, nearly new. Wood house, shop, granary. House and barns watered by running water; fields, by spring. Occupied by owner. Reason for selling, advanced age. Price, \$4,500. Terms reasonable. Address George W. Beardsley, owner, South New Berlin, R. D. No. 1, N. Y.

No. 885.—Farm of 105 acres, located 2½ miles from Gilbertsville P. O., R. D.; 3 miles from railway station on line of O. & W. R. R.; ½ mile from school; 2½ miles from church; 2½ miles from butter factory; 3 miles from milk station and 4 miles from condensing plant. Highways, hilly but good. Nearest village, Norwich, population 7,422, 12 miles distant, reached by highway. General surface slopes to west. Nature of soil, red shale, good. Acres in meadow, 35; in natural pasture, 50; in timber, 20, second growth, hardwood, and chestnut. Acres tillable, 75. Fruit, about 75 apple and a few pear trees. Best adapted to hay, corn and oats. Fences, rail, wire and stone, in fair condition. Sixteen-room house in good condition. Outbuildings: horse barn, 30x40, good condition; cow barn, 30x40, fair condition; granary, hay barn and wood shed. House and barns watered by well, fields by springs and brook. Occupied by tenant. Reason for selling, other business. Price, \$2,800. Terms, \$1,200 cash, balance on mortgage. Address Wm. M. Hakes, owner, Gilbertsville, N. Y.

No. 886.—Farm of 113 acres, located 2½ miles from Gilbertsville P. O., R. D.; 3 miles from railway station at Rockwells Mills on line of O. & W. R. R.; ¼ mile from school; 2½ miles from Protestant church; 2½ miles from butter factory; 3 miles from milk station and 4 miles from condensing plant. Highways, hilly but good. Nearest village, Norwich, population 7,422, 12 miles distant, reached by highway. General surface, somewhat hilly, sloping to west. Nature of soil, red shale, good. Acres in meadow, 40; in natural pasture, 60; in timber, 13; hardwood, chestnut and pine. Acres tillable, 60. Fruit, 100 apple, 10 pear, few plum and cherry trees and grape vines. Best adapted to hay, corn and oats. Fifteen-room house in good condition. Outbuildings: cow barn, 30x52, with basement, ell 20x40; horse barn 30x40, with basement; hog pen, poultry house 20x30; large wood house, stone house all in good condition.

House watered by well and cistern, barns by well and spring, fields by spring and brook. Occupied by tenant. Reason for selling, other business. Price, \$3,500. Terms, \$1,500 cash, balance on mortgage. Address W. M. Hakes, owner, Gilbertsville, N. Y.

No. 887.—Farm of 24 acres, located ¼ mile from Holmesville P. O. and railway station; on line of N. Y., O. & W. R. R. (New Berlin branch); ½ mile from school and churches; ½ mile from butter and cheese factory; 6 miles from condensing plant. Highway, good. Nearest village, Norwich, population 7,422, 8 miles distant, reached by rail or highway. General surface, rolling, level and hilly. Altitude, 1,200 feet. Nature of soil, sandy and clay loam. Acres in meadow, 12; in natural pasture, 12; acres tillable, 16. Fruit, 30 apple, 25 cherry, pear and plum trees, and strawberries. Best adapted to general farm crops. Fences, board and wire, in good condition. House, 9 rooms, modern, in good condition. Outbuildings: new barn, 28x40, with basement and gambrel roof, 6 stanchions, 3 box stalls. House and barns watered by running water, fields by river. The farm is on Unadilla river, affording fishing. Price, \$3,000. Terms, as arranged. Address Harriet Weaver, owner, Vineland, N. J., or R. A. Borland, agent, room 3, Cook Block, Norwich, N. Y.

No. 888.—Farm of 210 acres; located 1½ miles from Gilbertsville P. O.; 6½ miles from railway station at Mt. Upton on line of N. Y., O. & W. R. R.; ½ mile from school; 1½ miles from Protestant churches and butter factory; 2 miles from cheese factory; 6½ miles from milk station and milk condensing plant. Highways, good, part State road. Nearest city, Oneonta, population about 9,497, 17 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,165 feet. Soil, good. Acres in meadow, about 140; in natural pasture, about 25. Acres tillable, 180. Fruit, apples and pears. Best adapted to corn, oats, potatoes and hay. Fences, wire, good condition. House, 12 rooms, long piazza. Outbuildings: horse barn, 30x50; barn, 40½x30; hay barn, 30x50, with shed attached, 18x60; corn house; milk house; storage house, 26x34; granary, 20x26; ice house, 15x30; hog and poultry house, 20x30; milk house, 10x10. Watered, house and barn by running water; fields, by springs. A brook runs through farm. Occupied by

tenant. Reason for selling, owner lives in New York city and cannot attend to farm. Price, \$6,000. Terms, \$2,500 cash, balance on mortgage. Will sell dairy also, if purchaser desires. Address F. E. Brewer, owner, 41 Hamilton avenue, New Brighton, New York. Owner will rent.

#### TOWN OF CHERRY VALLEY

Population 1,706

No. 889.—Farm of 160 acres; 4 miles from Cherry Valley P. O., R. D. 2; 3 miles from railway station at Sharon Springs, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school and Protestant churches; 3 miles from butter factory and milk station. Highways, good. Surface, mostly level. Soil, limestone, good. Acres in timber, 35, beech, maple, ash and basswood. Acres tillable, 125. Fruit, apples, pears, cherries, plums, also currants and blackberries. Best adapted to hay, grain, potatoes, corn, hops, etc. House, 40x26, 14 rooms, attic and wood house. Outbuildings: barn, 20x44, with shed, 18x30; wagon house, 24x45; pig pen, 15x20; all in good condition. Telephone in house. Tenant house and barn on farm. Watered, house by well; barns, by well and springs; fields, by spring. Reason for selling, to close an estate. Price \$4,000. Address John D. Lynk, owner, Cherry Valley, N. Y. Owner will rent.

#### TOWN OF EDMESTON

Population 1,567

No. 890.—Farm of 42 acres; in village of Edmeston, on line of N. Y., O. & W. R. R.; graded school; Baptist and Methodist churches; condensing plant in village. State road. Nearest cities, Oneonta and Norwich, 24 miles distant, reached by rail or highway. Surface of farm, part level and part rolling. Altitude, 1,232 feet. Soil, clay loam, very strong soil. Acres in meadow, 25; in natural pasture, 17; all tillable. Fruit, 20 apple trees, winter and fall varieties. Best adapted to corn, oats, potatoes, beans, peas and hay. Fences, board and wire, in good condition. Large 2-story house, with 2 wings, hot water heat, hot and cold water throughout, \$1,500 in plumbing, nicely painted, large lawn. Barns: 84x40, slate roof, cost \$2,000 to build, modern; another barn, 30x40, fine repair; large granary, in fine repair. Watered, house, by city water; barns, by running water; fields, by running water and living spring. 7

miles from Unadilla river. A fine small farm in village. There is a flat at end of street with 26 building lots ready to sell and open up. Occupied by owner. Reason for selling, owner has business interests elsewhere. Price, \$8,000. Terms, \$4,000 cash, balance long term of years at 5%. Address A. H. Medbury, owner, Edmeston, N. Y. Owner will rent.

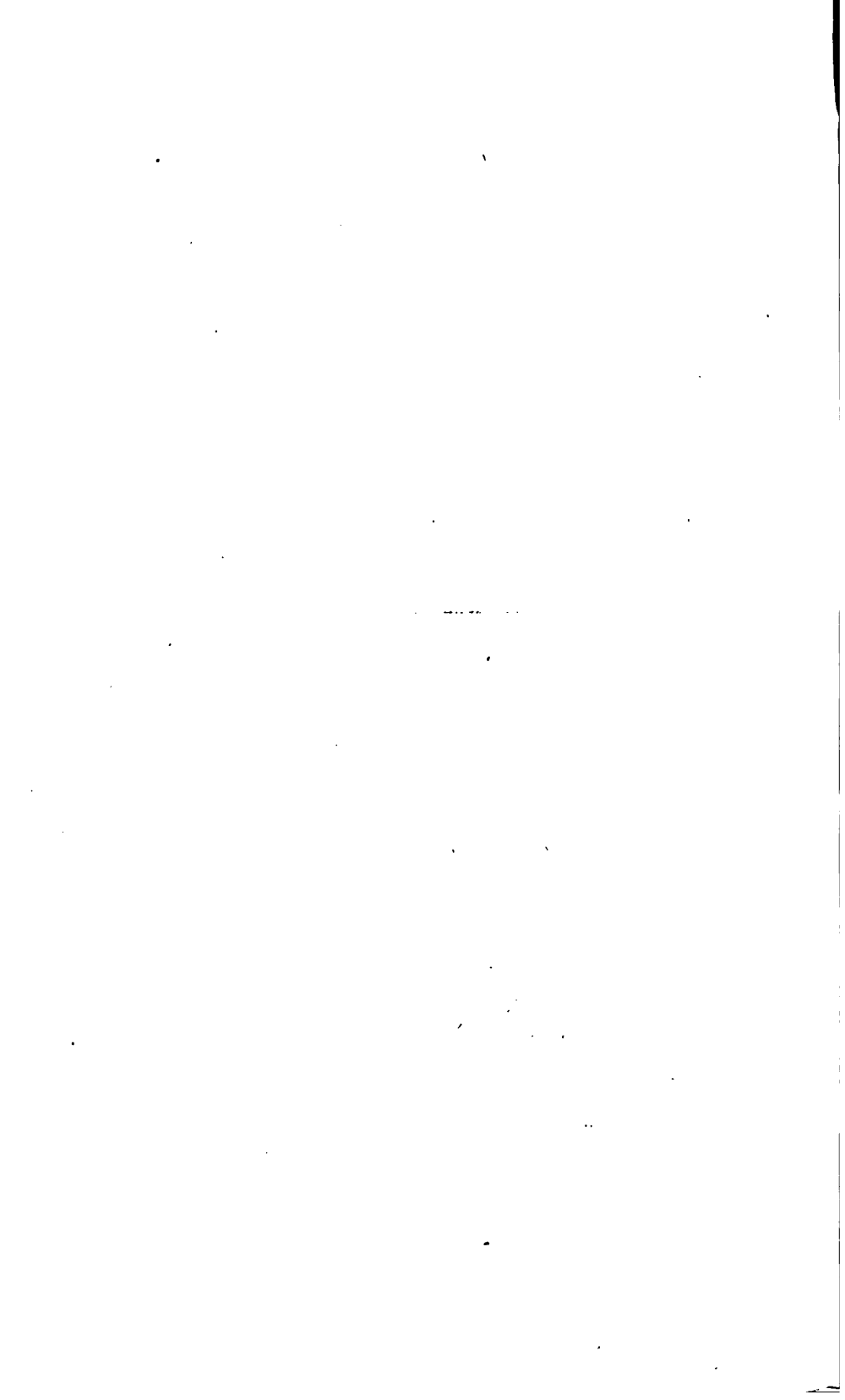
No. 891.—Farm of 150 acres;  $2\frac{1}{2}$  miles from Edmeston P. O.;  $2\frac{1}{2}$  miles from railway station at Edmeston, on line of O. & W. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from Baptist and Methodist churches, butter factory, cheese factory, milk station and condensing plant. Highways, good, on a grade, but not bad hills. Nearest village, Edmeston, population 700. Surface of farm, meadows slope to east. Soil, very productive. Acres in meadow, 40; in natural pasture, 70; in timber, 40, maple, beech and hemlock. Acres tillable, 40. Fruit, fairly good orchard of 50 trees, various kinds. Best adapted to corn, oats and hay. Fences, mostly barbed wire, in good condition. Fourteen-room house, in good condition. New barn, 32x70, with concrete floor, swing stanchions for 30 head; 2 box stalls, 4 horse stalls, roofed with best grade of metal shingles; silo; 4 other buildings. Watered, house, by spring; fields, by never-failing springs. Reason for selling, owner has other business. Price, \$4,500. Terms, \$1,000 cash, balance 5 years at 5%. Address Clarence Talbot, owner, Edmeston, N. Y.

No. 892.—Farm of 240 acres;  $\frac{1}{2}$  mile from Edmeston P. O., R. D. 1, and railway station on line of N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches;  $\frac{1}{2}$  mile from Borden's condensed milk plant. Highways, good. Nearest city, Oneonta, population 9,497, 24 miles distant, reached by rail and highway. Surface of farm, part level and part rolling. Altitude, 1,200 feet. Soil, loam, very strong. Acres in meadow, 100; in natural pasture, 80; in timber, 55, hemlock, maple and beech. Acres tillable, 175. Fruit, apples. Best adapted to corn, oats, potatoes, beans, peas, hay, etc. Fences, mostly wire, good condition. House, 2 stories, with wing, large, good condition. Outbuildings: basement barn, 109x32, concrete floors all through, stable room for 44 head of cattle; 2 silos, 140-ton capacity; shed, 100 feet, with hay loft above; 4 outbuildings; all in good repair. Watered, house and barn, by running



**FIG. 310.—HOUSE AND BARN ON FARM NO. 888, TOWN OF BUTTERNUTS,  
OTSEGO COUNTY**





water; fields, by living streams. This farm is 6 miles from Unadilla river. Occupied by tenant. Reason for selling, owner is in business in Michigan. There is \$5,000 worth of hemlock and \$2,000 worth of hardwood timber on farm; 123 tons of hay were cut last year. Price, \$50 per acre. Terms, \$5,000 down, balance on long time at 5% interest. Address A. H. Medbury, owner, Edmeston, N. Y. Owner will rent.

**TOWN OF EXETER**

Population 1,067

No. 893.— Farm of 113 acres, adjoining the village of Exeter Center; 2 miles from Schuyler Lake on line of O. & M. Valley R. R.; store and post-office on the land; close to good school and churches. Very desirable property for summer home. On a good road; in a fine location. Five acres of orchard. Very fertile soil. House, 2 stories, in good condition, 35x40, with wing, 20x30. Barn, good, 35x65, with new addition; other outbuildings, hen house, etc. Watered by springs, well and brook. Fences, good. Price, \$4,000. Terms, \$2,000 cash, balance on time. Address P. J. Horan, owner, Exeter, N. Y.

No. 894.— Farm of 114 acres; located 6 miles from Richfield Springs P. O., R. D. No. 5; 3 miles from railway station at Schuyler Lake on line of O. & H. R. R.; 1½ miles from school; 3 miles from churches; 1¼ miles from cheese factory and 3 miles from milk station. Highways, rather hilly. General surface, rather hilly pastures with sloping meadow. Acres in meadow, 40; in natural pasture, 40; in timber, 34, hard and soft. Acres tillable, 60. Fruit, 15 apple and 2 plum trees. Best adapted to hay, grain, potatoes and corn. Fences, barbed wire, in good condition. House, 24x50, fair condition. Barn, 28x90, fair condition, hop kiln, 24x36, good condition. House watered by well, fields by creek and springs. Schuyler Lake, 2 miles distant. Reason for selling, old age. Price, \$2,000. Terms, \$500 cash, balance on mortgage. Address Mrs. Mary Branigan, owner, R. D. No. 5, Richfield Springs, N. Y.

No. 895.— Farm of 120 acres; located 2 miles from Exeter Center P. O.; 4½ miles from railway station at Schuyler Lake on line of O. & H. R. R.; ¾ mile from school; 2 miles from church; 4 miles from butter factory; 2 miles from cheese factory and 4 miles from milk

station. Highways, good. General surface, rolling, with gradually sloping meadow. Nature of soil, good, fertile. Acres in meadow, 50; in natural pasture, 60; in timber, 10, hardwood. Acres tillable, 70. Fruit, 25 apple trees. Best adapted to hay, grain, potatoes, corn and hops. Fences, mostly barbed wire, in good condition. House, 1½ stories, frame, in good condition, wing 20x30. Outbuildings: barn 30x40, one 20x30; in fair condition, hop kiln, good condition, and other buildings. House watered by well, well near barns, fields by spring and creek. Reason for selling, old age. Price, \$3,500. Terms, \$1,000 cash, balance on mortgage. Address Daniel Horan, owner, Richfield Springs, N. Y. Owner will rent.

No. 896.— Farm of 2 acres; located 6 miles from Richfield Springs P. O., R. D. No. 5; 3 miles from railway station at Schuyler Lake on line of O. & H. R. R.; 1 mile from school; 3 miles from churches; ¼ mile from cheese factory and 3 miles from milk station. Highways, good. Soil, good. General surface, rolling. Acres in meadow, 2. Acres tillable, 2. Fruit, 4 apple trees. Best adapted to hay, grain and corn. Fences, barbed wire, good condition. House, 28x30, 2 stories, good condition. Outbuildings: barn 18x14, good condition, poultry house, in fair condition. House watered by well. Reason for selling, old age. Price, \$400. Terms, \$50 cash, balance on mortgage. Address Mrs. Ella J. Baker, owner, Garrettsville, N. Y.

No. 897.— Farm of 4¼ acres; located 1 mile from Schuyler Lake P. O., R. D. No. 5, and railway station on line of O. & H. R. R.; ¼ mile from school; 1 mile from churches; 20 rods from cheese factory and 1 mile from milk station. Highways, good. Nearest village, Richfield Springs, population 1,503, 6 miles distant, reached by rail or highway. General surface, level. Nature of soil, sandy loam. Acres tillable, 4. Fruit, 24 apple and 4 pear trees, 2 grape vines. Adapted to all kinds of crops. Fences, wire, good condition. House, 20x24, wing 12x18, newly shingled and papered. House watered by spring, fields by spring. Reason for selling, old age. Price, \$700. Terms, cash. Address Maria Niles, owner, Burlington Flats, N. Y.

**TOWN OF HARTWICK**

Population 1,813

No. 898.— Farm of 190 acres; located 1¼ miles from Hartwick P. O. and

railway station, on line of O. & M. R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{4}$  miles from churches and  $\frac{3}{4}$  mile from milk station. Highways, State road within  $\frac{1}{2}$  mile. General surface, rolling. Nature of soil, dark loam. Acres in natural pasture, 75; in timber, 30, variety. Fruit, 275 apple trees and other fruit. Best adapted to general farming. Fences, wire, good condition. House, 12 rooms, in good condition. Outbuildings: dairy barn 40x70, horse barn, another large barn, poultry house, hog house, granary, work shop, silo and horse barn. Watered, house has running water, barns by running water, fields by spring and brooks. Occupied by owner. Reason for selling, other business. Price, \$8,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Stock and tools can be purchased with place. Address Anderson F. Lathrop, Hartwick, N. Y., owner, or W. E. Head Farm Agency, brokers, 114 Arcade Building, Utica, N. Y.

## TOWN OF LAURENS

Population 1,458

No. 899.—Farm of 110 acres; 2 miles from Laurens P. O. and railway station at Laurens on line of Oneonta & Mohawk Electric R. R.; 2 miles from church and milk station; 1 mile from school. Highways, good. Nearest city, Oneonta, population 9,497, 11 miles distant, reached by rail. Surface, rolling. Soil, good mellow loam. Acres in meadow, 50; in natural pasture, 35; in timber, 25, pine, hemlock, beech and maple. About 145 fruit trees. Best adapted to corn, oats and potatoes. Fences, wire, in good condition. House, 16x40; wing, 24x32; summer kitchen, 16x16, in good condition. Barn, 44x74. Watered, house, by pump; barns, by running water; fields, by springs and creek. Within 2 miles of Gilbert's lake. About \$1,000 worth of timber on the place. Reason for selling, ill health. Price, \$4,000. With stock, tools, farm machinery and crops, price \$5,200. Terms, \$2,500 cash, balance on mortgage. Address A. H. Knight, owner, Laurens, N. Y.

No. 900.—Farm of 142 acres; located 2 miles from Laurens P. O. and railway station, on line of O. & H. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches and milk station. Highways, good. Nearest city, Oneonta, population 9,497, 9 miles distant, reached by rail and highway. General surface, rolling. Na-

ture of soil, good. Acres in timber, 30, hardwood, maple and beech. Acres tillable, 80. Fruit, plenty for family use. Best adapted to general farming. Fences, good. House, good condition. Barn, good condition. House watered by spring, barns, by spring and fields by spring. Brown's Lake, 2 miles distant. Reason for selling, old age. Price, \$3,500. Terms, easy. Address Mrs. Brink, owner, Laurens, N. Y., or L. Kirkegaard, broker, Laurens, N. Y. Owner will rent.

No. 901.—Farm of 175 acres; located  $\frac{1}{2}$  mile from Mt. Vision P. O. and railway station, on line of O. & H. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches and  $\frac{1}{2}$  mile from milk station. Highways, good. Nearest city, Oneonta, population 9,497, 10 miles distant, reached by rail or highway. General surface, level. Nature of soil, good creosote bottom. Acres in timber, 12, oak. Acres tillable, 150. Fruit, enough for family use. Best adapted to all crops. Fences, wire, good condition. House, large, all modern improvements. Barn, large, in excellent condition. House watered by springs, barns by springs and fields by springs. Occupied by owner. Reason for selling, ill health. Price, \$7,000. Terms, \$3,000 cash, balance on mortgage. Address J. W. Bard, owner, Mt. Vision, N. Y., or L. Kirkegaard, broker, Laurens, N. Y.

No. 902.—Farm of 150 acres; located 4 miles from Laurens P. O. and railway station, on line of Otsego & Herkimer R. R.; 1 mile from school; 4 miles from churches;  $\frac{1}{4}$  mile from butter factory;  $3\frac{1}{2}$  miles from cheese factory; 4 miles from milk station. Highways, hilly but good. Nearest city, Oneonta, population 9,497, 12 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,600 feet. Soil, clay loam. Acres in meadow, 60; in natural pasture, 60; in timber, 30, hardwood. Acres tillable, 120. Fruit, apples and pears. Best adapted to corn, oats, millet, potatoes, buckwheat and rye. Fences, wire, good condition. House, 14 rooms, good condition. Outbuildings: cow barn, horse barn, hen house, ice box, granary, etc. Watered by well, springs and creeks. Occupied by owner. Farm 40 rods from Gilbert's Lake. Reason for selling owner has another farm. Price, \$4,000. Terms, \$1,500 down, balance on mortgage. Address Milton Brown, owner, Laurens, N. Y., R. D. 1.

No. 903.— Farm of 75 acres; located 4 miles from Laurens P. O., R. D. 1, and railway station on line of Oneonta & Herkimer trolley;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from Episcopal church;  $1\frac{1}{2}$  miles from butter factory; 5 miles from cheese factory and 4 miles from milk station. Highways, good. Nearest city, Oneonta, population 9,497, 8 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, 1,400 feet. Nature of soil, clay loam. Acres in meadow, 40; in pasture, 30; in timber, 5, hardwood. Acres tillable, 55. Fruit, for family use. Best adapted to hay, grains and potatoes. Fences, wire, in good condition. House, 10 rooms, in good condition. Outbuildings: new barn, 34x64; silo, poultry house and machine shed. House, barn and fields watered by springs. Occupied by owner. Reason for selling, owner has too much land. Price, \$2,500. Terms, \$1,000 cash. Address C. W. Peaslee, owner, Laurens, N. Y., or M. Hauberg, agent, Laurens, N. Y., R. D. 1.

No. 904.— Farm of 310 acres; located 4 miles from Laurens P. O., R. D. 1, and railway station on line of Oneonta & Herkimer trolley;  $\frac{1}{2}$  mile from school; 1 mile from Episcopal church;  $2\frac{1}{2}$  miles from butter factory; 4 miles from cheese factory and milk station. Highway, hilly, but good. Nearest city, Oneonta, population 9,497, 10 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, 1,300 feet. Nature of soil, clay loam. Acres in meadow, 150; in pasture, 100; in timber, 60, hardwood and hemlock. Acres tillable, 200. Fruit, plenty for home use. Best adapted to hay, grains and potatoes. Fences, wire, rail and stone. House, large, brick in fair condition. Outbuildings: large barn and machine shed, in fair condition. House watered by running water, barns by brooks, fields by stream and brook. Gilbert's Lake, 1 mile distant. Reason for selling, owner has too much land. Price, \$3,500. Terms, \$1,500 cash, balance on mortgage. Owner will rent with option to buy. Address A. D. Smith, owner, R. D., Laurens, N. Y., or M. Hauberg, agent Laurens, N. Y.

No. 905.— Farm of 152 acres; located  $\frac{1}{2}$  mile from Laurens P. O., R. D. 1, and railway station on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{2}$  mile from butter factory and milk station. Nearest city,

Oneonta, population 9,497, 9 miles distant, reached by rail or highway. General surface, slightly rolling, slopes to east. Altitude, 1,200 feet. Nature of soil, loam. Acres in meadow, 110; in pasture, 10; in timber, 30, hemlock, beech and maple. Acres tillable, 122. Fruit, 65 apple trees. Best adapted to oats, rye, barley, buckwheat, corn and potatoes. Fences, wire, in good condition. House, 30x40, 11 rooms, 2 stories, good condition. Outbuildings: barn, 30x50, good condition; wagon house, 30x30; granary, hen house, etc. House watered by well, barns by springs, fields by springs. Occupied by owner. Reason for selling, wishes smaller place. Price, \$4,300. Terms, \$2,500 down, balance on time. Address N. C. Jensen, owner, Laurens, N. Y. Route 1.

No. 906.— Farm of 72 acres; located  $4\frac{1}{2}$  miles from Laurens P. O., R. D. 1, and trolley station on line of Oneonta & Herkimer railway;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{2}$  mile from butter factory; 5 miles from cheese factory;  $2\frac{1}{2}$  miles from milk station. Highway, proposed State road. Nearest city, Oneonta, population 9,497, 9 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,500 feet. Nature of soil, clay loam. Acres in meadow, 40; in pasture, 20; in timber, 12, hardwood and hemlock. Acres tillable, 60. Fruit, sufficient for family use. Best adapted to hay, grain and potatoes. Fences, stone, rail and wire, in fair condition. House, 8 rooms, in fair condition. Outbuildings: barn, 28x50, in fair condition; hen house and machine shed. House and barn watered by well; fields by spring and brook. Reason for selling, owner's ill health. Price, \$1,500. Terms, \$1,000 cash, balance on mortgage. Address Joseph Clark, owner, 14 River street, Oneonta, N. Y., or M. Hauberg, agent, Laurens, N. Y., R. D. 1.

No. 907.— Farm of 86 acres; located 4 miles from Laurens P. O., R. D. 1, and railway station, on line of Otsego & Herkimer R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches;  $1\frac{1}{2}$  miles from milk station; 4 miles from cheese factory. Highways, good. Nearest city, Oneonta, population 9,497, 12 miles distant, reached by rail and highway. Surface of farm, level. Altitude, about 1,700 feet. Soil, some fair, some good. Acres in meadow, 36; in natural pasture, 38; in timber, 12, beech and maple. Acres tillable, 70. Fruit, apples, pears,

plums, cherries and grapes. Best adapted to hay, grain and potatoes. Fences, wire and stone wall, fair condition. House, 30x25, 2 stories. Out-buildings: barn, 36x38, with stone basement; hen house, 20x40; wood shed, 12x24. Watered, house, by running water; barns and fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,500. Terms,  $\frac{1}{2}$  down, balance on time. Address C. A. Brownell, owner, Laurens, N. Y., R. D. 1.

## TOWN OF MARYLAND

Population 1,852

No. 908.—Farm of 159 acres;  $2\frac{1}{2}$  miles from Maryland P. O. and railway station at Maryland on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from church and milk station. Highways, good. Nearest city, Oneonta, population, 9,497,  $14\frac{1}{2}$  miles distant, reached by rail and highway. Surface, wide valley, nearly level, with pastures on hillside. Soil, good. Acres in meadow, 62; in natural pasture, 57; in timber, 40, maple, beech, chestnut and hemlock. Acres tillable, 108. A few fruit trees. Best adapted to potatoes, oats, buckwheat and corn. Fences, wire and rail, in fair condition. Large frame house, in good condition, but needs painting. Two large barns, one in good condition and one in fair condition; large hen house and sap house. Running water in house. Nine miles from Otsego Lake; 2 miles from Crumhorn Lake. Trout brook on farm. This is one of the best dairy farms in the town of Maryland and would be suitable for summer home. Reason for selling, death of husband. Price, \$3,500. Terms, \$1,350 on mortgage, balance cash. Address Mrs. E. G. Brown, owner, Worcester, N. Y. Owner will rent.

No. 909.—Farm of 30 acres; located  $3\frac{1}{2}$  miles from Schenevus P. O., R. D. 1, and railroad station on line of D. & H. R. R.; 1 mile from school;  $3\frac{1}{2}$  miles from Catholic and Protestant churches and milk station. Highways, good, part state road. Nearest city, Oneonta, 16 miles distant, population 9,497, reached by rail and highway. Altitude, about 1,600 feet. Soil, some slate, mostly good. Acres in meadow, 15; in natural pasture, 5; in timber, 10, hard and soft wood, chestnut and pine. Acres tillable, 20. Fruit, apples, pears, plums and berries. Best adapted to hay, corn and potatoes. Fences, some rail and some wire, good. House, 28x30, fair condition.

Watered, house, by running water; barn, by brook; fields, by spring and brook. Occupied by tenant. Reason for selling, owner lives too far away to attend to farm. Price, \$600. Terms, cash. Address Manley E. Clark, owner, Sussex, N. J.

No. 910.—Farm of 225 acres; located 1 mile from Schenevus P. O., R. D. 1;  $1\frac{1}{4}$  miles from railway station at Schenevus on line of D. & H. R. R.; 1 mile from high school;  $\frac{1}{4}$  mile from country school; 1 mile from Catholic and Protestant churches;  $1\frac{1}{4}$  miles from milk station; 2 miles from cheese factory. Highways, level, State road. Surface of farm, level and rolling. Altitude, 1,300 feet. Soil, sandy loam. Acres in meadow, 110; in natural pasture, 30; in timber, 35, mixed; acres tillable, 200. Fruit, apples and pears. Adapted to all crops grown in this climate. Fences, mostly wire, good condition. House, large, good condition. Old style, roomy barns. Watered, house and barns by running spring water; fields, by springs and streams. Occupied by tenant. Reason for selling, to close an estate. Price, \$10,000. Address S. Hubbard Estate, Schenevus, N. Y.

## TOWN OF MIDDLEFIELD

Population 1,949

No. 911.—Farm of 250 acres; 2 miles from Roseboom and 6 miles from Cherry Valley railway station, on the D. & H. R. R. Soil, black loam. Acres in meadow, 100; pasture, 100; timber, 50. House, large, in good condition. Out-buildings: 3 large barns; 1 cow stable, 1 large horse barn, new cow barn; hog house and hen house with concrete floors; new silo erected this year. Watered by creek, wells and springs. Fences, wire, in good condition. Reasonable price. Terms, moderate. Address T. & W. Cunningham, owners, Cooperstown, N. Y., R. D. 5.

No. 912.—Farm of 163 acres; located  $2\frac{1}{2}$  miles from Cooperstown P. O., R. D. No. 5, and railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from churches;  $2\frac{1}{2}$  miles from butter factory;  $2\frac{1}{2}$  miles from cheese factory and condensing plant. Highways, good. General surface, part level and rolling. Nature of soil, gravelly loam. Acres in meadow, 30; in natural pasture, 25; in timber, 20, young, all kinds; acres tillable, 100. Fruit, apples and other varieties. Best adapted to hops, corn, potatoes and all

kinds of grain. Fences, part wire and other material. House, large, and small tenant house. Outbuildings: 3 large barns, hop house, and other buildings. House watered by spring; barns, by spring; fields, by Red Creek. Occupied by owner. Reason for selling, old age. Price, \$7,000. Terms, \$3,500 cash, balance on mortgage. Address A. O. Parshall, owner, Cooperstown, N. Y.

TOWN OF MORRIS  
Population 1,434

No. 913.—Farm of 60 acres; located 2½ miles from Morris P. O.; 5 miles from railway station at New Berlin, on line of O. & W. R. R.; 5 miles from milk station; 2½ miles from milk condensing plant; ½ mile from school; 2½ miles from Catholic and Protestant churches. Highways, somewhat hilly but good. Surface of farm, rolling and level. Altitude, 1,600 feet. Soil, good. Acres in meadow, 40; in natural pasture, 10; in timber, 8, good for firewood, hard; acres tillable, 40. Fruit, 30 trees in all, mostly apples, a few pears and cherries. Best adapted to oats, corn, buckwheat and barley. Fences, wire and wood, good condition. House, 8 rooms, good condition. Outbuildings: large barn with 3 horse stalls and 6 sow stanchions, 2 hay mows, 2 wagon sheds, hen house and hog house. Watered, house and barn, by well; fields, by spring and creek. Occupied by owner. Reason for selling, owner a widow. Price, \$1,350. Terms, cash. Owner will sell stock and tools if desired. Address Mrs. Phoebe A. Simpson, owner, New Berlin, N. Y.

No. 914.—Farm of 115 acres; located 1½ miles from Morris P. O., R. D. 1; 9 miles from railway station at New Berlin, on line of Ontario & Western R. R.; 1½ miles from school and churches; 1½ miles from butter and cheese factory and milk station. Nearest city, Ontario, 14 miles distant, population 9,497. General surface, level. Altitude, 1,160 feet. Acres in meadow, 35; in pasture, 60; in timber, 20, beech, ash and basswood; acres tillable, 50. Fruit, over 25 apple trees. Best adapted to corn and grains. Fences, barbed wire, fair condition. House, 12 rooms, large woodshed, good condition. Outbuildings: main barn, 30x60; wagon house, 20x30. Sheds, straw barn, granary, all in good condition. House watered by spring and wells; barns, by springs; fields, by brook and spring. Occupied by owner. Price

\$4,000. Terms, ½ cash, balance to suit purchaser. Address Galen F. Lull, owner, Morris, N. Y.

No. 915.—Farm of 200 acres, located 2½ miles from Morris P. O.; 10½ miles from railway station at New Berlin on line of N. Y., O. & W. R. R.; 2 miles from school; 2½ miles from churches; 1 mile from butter factory; 2½ miles from cheese factory, and 10½ miles from milk station and condensing plant. Highways, good. General surface, rolling. Nature of soil, good. Acres in meadow, 70; in natural pasture, 80; in timber, 50, good hickory, chestnut, beech and maple. Acres tillable, 125. Fruit, apples and pears. Best adapted to oats, potatoes, wheat, rye and corn. Fences, wire, fair condition. House, good size, in fair condition. Outbuildings: cow barn, 78x26; horse barn, 26x30. House watered by 2 wells, barns by spring and fields by springs. Occupied by tenant. Reason for selling, old age. Price, \$3,500. Terms, \$2,000 cash, balance on mortgage. Address John A. Light, owner, Morris, N. Y., Box 155. Owner will rent.

No. 916.—Farm of 100 acres, located 3 miles from Morris P. O.; 4½ miles from railway station at New Berlin, on line of N. Y., O. & W. and U. V. R. R.; 1 mile from school; 3 miles from church; 3 miles from butter factory; 3 miles from cheese factory; 4½ miles from milk station and condensing plant. Highways, hilly but good. Nearest village, Norwich, population 7,422, 14 miles distant, reached by highway. General surface, hilly. Altitude, 1,800 feet. Acres in meadow, 50; in natural pasture, 45; in timber, 5, hemlock and hardwood. Acres tillable, 90. Fruit, 30 apple trees and some pears. Best adapted to corn, hay, oats, buckwheat, etc. Fences, wire and rail, fair condition. House, 8 rooms, fair condition. Outbuildings: basement barn, 62x30, good condition; poultry house, hop house, fair condition. House watered by spring, fields by spring. Occupied by owner. Price, \$2,000. Terms, \$800 cash, balance on mortgage. Address W. M. Lampher, owner, Morris, N. Y.

No. 917.—Farm of 133 acres, located 3½ miles from South New Berlin P. O., R. D. No. 1, and railway station, on line of U. V. R. R.; 1 mile from school; 3½ miles from churches and 3½ miles from butter factory; 1½ miles from cheese factory and 3½ miles from Borden's

milk station. Highways, hilly, good condition. Nearest village, Norwich, population 7,422, 10½ miles distant, reached by highway. General surface, rolling. Altitude, 1,700 feet. Nature of soil, clay and red. Acres in meadow, 50; in natural pasture, 30; in timber, 33, 20 acres of hemlock and hardwood, 200 young maples (sugar) and 13 acres of second growth timber. Acres tillable, 70. Fruit, 6 pear, 12 cherry, 4 plum and 20 apple trees. Best adapted to potatoes, corn, grain and hay. Fences, mostly barbed wire, good condition. Large house, in good condition. Outbuildings: barns, in good condition, newly built lean-to, cow stable for 18 head of stock, large horse barn, wagon house, milk house, 2 poultry houses, 2 silos and granary. House watered by well, barns by spring and well, and fields by springs. Occupied by owner. Reason for selling, too much land. Price, \$3,000. Terms, cash. Address George H. Wells, owner, South New Berlin, N. Y.

No. 918.—Farm of 80 acres, located 7 miles from Laurens P. O., R. D. No. 1, and railway station, on line of O. & H. trolley; ½ mile from school; 2½ miles from churches; ½ mile from butter factory; 2½ miles from cheese factory; 10 miles from milk station and condensing plant. Highways, hilly but good. Nearest city, Oneonta, population 9,497, 12 miles distant, reached by rail and highway. General surface, rolling. Altitude, 1,825 feet. Nature of soil, clay loam. Acres in meadow, 35; in natural pasture, 30, in timber, 15, hardwood. Acres tillable, 60. Fruit, a few pear, apple and plum trees. Best adapted to hay, corn, oats, potatoes, buckwheat and peas. Fences, mostly wire, good condition. House, 9 rooms, good condition. Outbuildings: basement barn, 36x46; silo, 3 poultry houses, 1, 12x12, 1, 12x30, 1, 14x20; granary, 12x14, all in fair condition. House watered by well, barns by well, and fields by springs. Butternut Creek, 2½ miles distant. Occupied by owner. Reason for selling, other business. Price, \$2,000. Terms, \$1,200 cash, balance on mortgage. Address A. E. Eaton, owner, R. D. No. 1, Laurens, N. Y.

No. 919.—Farm of 100 acres, located 4 miles from South New Berlin P. O., R. D. No. 1, and railway station, on line of N. Y., O. & W. R. R.; ¼ mile from school; 3 miles from churches; 3 miles from butter factory; 3 miles from cheese factory; 4 miles from milk station and 5 miles from condensing plant. Highways,

good dirt roads. Nearest village, Norwich, population 7,422, 12 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,500 feet. Nature of soil, clay loam. Acres in meadow, 35; in natural pasture, 55; in timber 10, beech, maple and hemlock. Acres tillable, 90. Fruit, 25 apple, 6 pear, 3 plum, 2 cherry trees and 1 crab apple tree. Best adapted to potatoes, hay and grain. Fences, wire, in good condition. House, 12 rooms, 2 stories with bay window, painted. Outbuildings: basement barn, 36x62; granary, tool house, 16x32; milk house, poultry house, ice house and hog pen. House watered by wells, barns by well and brook, fields by brook and springs. Unadilla river, 4 miles distant. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Terms, \$1,500 cash, balance on mortgage. Address Leander J. Moffett, owner, R. D. No. 1, South New Berlin, N. Y.

No. 920.—Farm of 80 acres, located 3¼ miles from Morris P. O., R. D. No. 1; 5 miles from railway station at South New Berlin on line of N. Y., O. & W. R. R.; ⅝ mile from school; 3¼ miles from churches; 4 miles from butter factory; 4 miles from cheese factory; 4 miles from milk station and 9 miles from condensing plant. Highways, fairly good. General surface, slightly rolling. Altitude, 1,500 feet. Nature of soil, stony loam. Acres in meadow, 35; in natural pasture, 30; in timber, 15, hemlock, pine, ash and maple. Acres tillable, 60. Fruit, 35 apple and 5 crab apple trees, also gooseberries. Best adapted to hay, grain and potatoes. Fences, rail, wall and wire, fair condition. House, main part 28x32, with wing 14x19, fair condition, house 24x29. Barn, 26x36, good roof, and outbuilding, 20x30, poor condition. House watered by well, barns by well, fields by spring. Reason for selling, other business. Price, \$1,000. Terms, \$600 cash, balance on mortgage. Address Vern Harrison, owner, Hobart, N. Y.

No. 921.—Farm of 16 acres; located 1 mile from Morris P. O.; 8 miles from railway station at New Berlin on line of N. Y., O. & W. R. R.; ½ mile from school; 1 mile from Protestant churches, butter factory and milk station; 3 miles from cheese factory; 8 miles from milk condensing plant. Highways, good. Nearest city, Oneonta, population 9,497,

14 miles distant, reached by highway. Surface of farm, level. Altitude, 1,103 feet. Soil, loam. Acres in meadow, 13; in natural pasture, 3. Acres tillable, 16. Fruit, apples, pears, plums and cherries. Best adapted to corn, oats, wheat, buckwheat and potatoes. Fences, barbed wire, nearly new. House, 9 rooms, good condition. Outbuildings: barn, 34x18; barn, 40x20; barn, 14x24. Watered by well and brook. Butternut Creek, 10 rods from farm. Occupied by owner. Reason for selling, owner in other business. Price, \$2,000. Terms, one-half down, balance on mortgage at 5%. Address A. J. Wightman, owner, Morris, N. Y. Owner will rent.

No. 922.— Farm of 144 acres; located  $\frac{1}{2}$  mile from Morris P. O.;  $7\frac{1}{2}$  miles from railway station at New Berlin on line of O. & W. R. R.;  $\frac{1}{2}$  mile from school, butter factory, milk station and Protestant churches; 7 miles from milk condensing plant. Highways, good. Nearest city, Oneonta, population 9,497, 14 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,300 feet. Acres in meadow, 72; in natural pasture, 52; in timber, 20, beech, maple, hemlock and pine. Acres tillable, 100. Fruit, 75 apple and 10 plum trees and 1 grape vine. Best adapted to corn, oats, buckwheat, barley, hay and potatoes. Fences, wire, good condition. House, 11 rooms, good condition. Outbuildings: barn, 30x56, with basement; horse barn, 26x40, new; hog house and hen house. Running water at house and barns. Brook runs through length of farm. Occupied by owner. Reason for selling, ill health. Price, \$4,000. Terms to suit purchaser. Address E. W. Davis, owner, Morris, N. Y. Owner will rent.

## TOWN OF NEW LISBON

Population 1,039

No. 923.— Farm of 80 acres;  $2\frac{1}{2}$  miles from Garretttsville P. O., on R. D. 3 from New Berlin. Soil, loam, very productive. Acres in meadow, 40; pasture, 30; timber, 10. There are locust trees on the farm which nearly pay for the place. House, 32x25. Basement barn, 36x46; cow barn, 20x40; granary; hen house; hog house. Watered by never-failing spring, piped to house and barns. Fences, wire, rail and locust trees. Price, \$1,700, Terms, easy. Address Henry Hnoch, owner, New Berlin, N. Y., R. D. 3.

No. 924.— Farm of 119 acres, located  $2\frac{1}{2}$  miles from Mt. Vision P. O. and railway station on line of O. & H. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from butter factory;  $2\frac{1}{2}$  miles from cheese factory and milk station. Highways, good. Nearest city, Oneonta, population 9,497, 11 miles distant, reached by rail or highway. General surface, rolling. Altitude, 1,500 feet. Acres in timber, 35, pine, hemlock and hardwood. Acres tillable, 75. Fruit, enough for family use. Best adapted to general farming and dairying. Fences, good. House, large, good condition. Two barns, good condition. House watered by wells and spring, barns by spring, and fields by spring. Brown's Lake,  $1\frac{1}{2}$  miles distant. Reason for selling, has other farms. Price, \$2,000. Terms, \$1,000 cash, balance on mortgage. Address Carl Wordlund, owner, Oneonta, N. Y., or L. Kirkegaard, broker, Laurens, N. Y. Owner will rent with option to buy.

No. 925.— Farm of 230 acres; located 4 miles from Mount Vision P. O., R. D. and railway station on line of Oneonta & Herkimer trolley;  $\frac{1}{2}$  mile from school; 4 miles from churches; 4 miles from butter and cheese factory and milk station. Highway, slightly hilly, good. Nearest city, Oneonta, population, 9,497, 12 miles distant, reached by highway and trolley. General surface of farm, gently rolling. Altitude, 1,400 feet. Nature of soil, clay loam. Acres in meadow, 70; in pasture, 100; in timber, 60, hardwood and hemlock; acres tillable, 160. Fruit, about 60 apple trees. Best adapted to hay, grain and potatoes. Fences, wire, two miles of woven wire. House, frame, about 20x35 (2 houses, frame); barn, 25x100, fair condition. House watered by well, barns by brook, fields by brooks. Near Gilbert's Lake. Occupied by tenant. Lease expires March 1, 1915, contract by month. Owner lives in Oneonta, in other business. Price, \$2,900. Terms, \$1,000 cash, balance easy terms. Address L. Huntington, owner, Oneonta, N. Y., or M. Hauberg, agent, Laurens, N. Y.

No. 926.— Farm of 230 acres; located 3 miles from Mt. Vision P. O., R. D. No. 2, and railway station, on line of Otsego & Herkimer R. R.;  $\frac{1}{2}$  mile from school and cheese factory; 2 miles from Baptist church; 3 miles from butter factory and milk station. Highways, good. Nearest city, Oneonta, population 9,497,

16 miles distant, reached by rail and highway. Surface of farm rolling. Soil, loam. Acres in meadow, 75; in natural pasture, 95; in timber, 60, hemlock, Basswood, hardwood. Acres tillable, 130. Fruit, grapes, cherries, plums. Best adapted to hay, potatoes, oats, corn and buckwheat. Fences, wire with locust posts. House, 10 rooms, good condition. Outbuildings: barn, 36x90; hen house, 12x50; granary and wagon house, 36x40, good condition. Running water at house and barn. Occupied by owner. Reason for selling, advanced age and ill health of owner. Price, \$4,500. Terms, easy. Address Jas. K. Reynolds, owner, Mt. Vision, N. Y., R. D. No. 2.

#### TOWN OF OTEGO

Population 1,899

No. 927.—Farm of 167 acres; located  $3\frac{1}{2}$  miles from Otego P. O., R. D. No. 3, and railway station on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $3\frac{1}{2}$  miles from milk station. Milk taken from farm by buyers' route. All macadamized road to farm except 1 mile. Nearest city, Oneonta, population 9,497, 7 miles distant. Surface of farm, sloping to east. Soil, red-dish loam. Acres in meadow, 70; in pasture, 40; in timber, 15, mostly second growth, from 6 to 8 years old. Acres tillable, 90. Fruit, good orchard. Best adapted to oats, potatoes, buckwheat, hay and corn. Fences, wire and stone. House, 10 rooms, can be arranged for two families. Outbuildings: barn, 40x70; barn, 30x40, good condition, all practically new roofs; hen house, hog house and milk house. Watered, running water to buildings by several never-failing springs. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,800. Terms to suit purchaser. Address R. R. Lacey, owner, 17 Mill street, Binghamton, N. Y. Will rent.

#### TOWN OF OTSEGO

Population 4,287

No. 928.—Farm of 230 acres; 3 miles from Otego P. O., R. D. 4; 3 miles from railway station at Otego and Wells-bridge, on line of D. & H. R. R.; 1 mile from school; 3 miles from Methodist, Baptist, Presbyterian churches;  $1\frac{1}{4}$  miles from butter factory; 3 miles from milk station. Highways, good, part State road. Nearest city, Oneonta, population 9,497, 12 miles distant, reached by rail and State road.

Surface of farm, rolling upland, facing east. Altitude, 1,200 feet. Soil, red loam. Acres in meadow, 50; in natural pasture, 155; in timber, 25, second growth chestnut; acres tillable, 100. Fruit, 35 apple and 12 plum trees. Best adapted to hay, corn, oats, potatoes and hops. Fences, stone wall and wire, in good condition. House, 10 rooms, partly new. Basement barn, 40x75, new, concrete floor in stables. Stable for 45 cows. Wagon house, 5 horse stalls; cow barn, with silo, 10x28. Watered, house by well, barns by spring near barn, fields by brook and springs. One mile from Susquehanna river. A very productive farm, good location, wintered 48 cows last winter and had 10 tons of hay left. Occupied by owner. Price, \$6,000. Terms, one-half down, balance on mortgage. Address J. E. Southard, owner, Otego, N. Y.

#### TOWN OF PITTSFIELD

Population 917

No. 929.—Farm of 98 acres; located 4 miles from railway station at New Berlin, on O. & W. R. R.;  $\frac{1}{4}$  mile from school and Protestant church; 4 miles from butter factory and milk condensing plant; 3 miles from cheese factory. Highways, hilly but good. Nearest city, Oneonta, population 9,497, 17 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,30 feet. Soil, hard pan loam. Acres in meadow, 25; in natural pasture, 50; in timber, 23; hemlock, maple and beech. Acres tillable, 50. Fruit, 100 apple trees. Best adapted to corn, potatoes, oats, peas and buckwheat. Fences, mostly wire, fair condition. House, 20x26, with wing, 18x30. Basement barn, 34x60, good condition. Watered by well, spring and creek. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$2,200. Terms,  $\frac{1}{2}$  down, balance on mortgage. Address David H. Webster, owner, New Berlin, N. Y., R. D. No. 3.

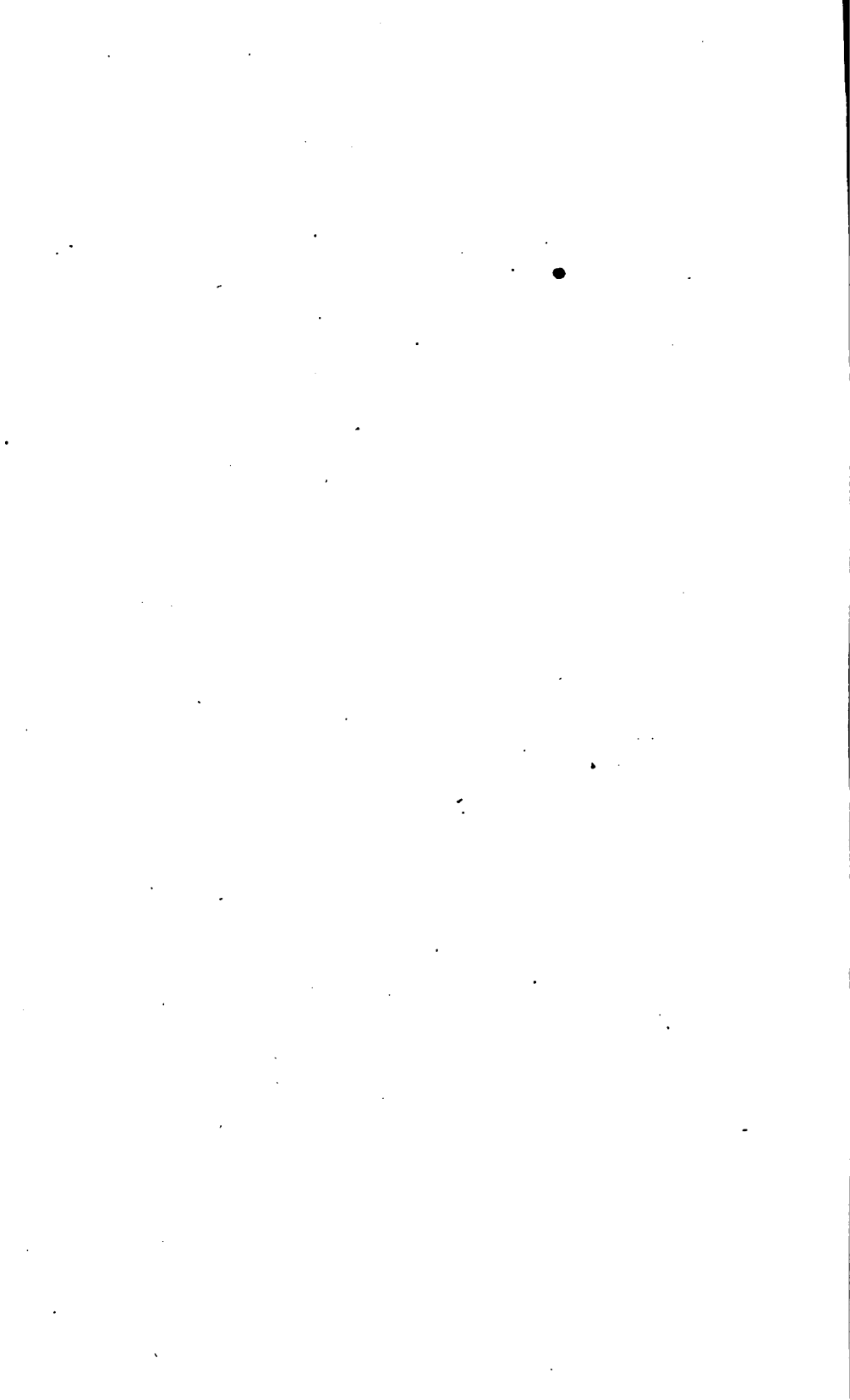
No. 930.—Farm of 187 acres; located 2 miles from New Berlin P. O., R. D. No. 3, and railway station on line of N. Y., O. & W. R. R.; 1 mile from school; 2 miles from churches; 2 miles from milk station and  $1\frac{1}{4}$  miles from condensing plant. Highways, level and good. Nearest village, New Berlin, population 1,114, 2 miles distant, reached by highway. General surface, somewhat hilly. Altitude, 1,250 feet. Nature of soil, hard pan and gravelly



**FIG. 311.—BUILDINGS ON FARM NO. 927, TOWN OF OTEGO, OTSEGO COUNTY**



**FIG. 312.—GENERAL VIEW OF FARM NO. 927, TOWN OF OTEGO, OTSEGO COUNTY**



loam. Acres in meadow, 70; in natural pasture, 80; in timber, 80, hemlock, pine, chestnut, beech, maple, etc. Acres tillable, 75. Fruit, apples, pears, cherries and berries. Best adapted to corn, potatoes, oats and buckwheat. Fences, mostly wire, in fair condition. Two houses, one of 7 rooms and one of 8 rooms. Outbuildings: basement barn, 30x40; horse barn, 24x30; granary, horse barn, hay barn and shops. House has running water and well, barns same, fields watered by spring and creek. Occupied by owner. Reason for selling, ill health. Price, \$7,000. Terms, cash, or part mortgage. Address W. H. Morse, owner, New Berlin, N. Y.

No. 931.— Farm of 150 acres; located 3 miles from New Berlin P. O., R. D. 5 and railway station on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches; 3 miles from milk station and condensing plant. Highway, good. General surface of farm, rolling. Altitude, 1,650 feet. Nature of soil, loam. Acres in meadow, 50; in pasture, 10; in timber, 20, beech, birch, maple, ash and hemlock. Acres tillable, 125. Fruit, 120 trees, apples and plums. Best adapted to hay, corn, hops, potatoes and buckwheat. Fences, wire, good. House,  $2\frac{1}{2}$  stories, 11 rooms, painted, 2-family. Outbuildings: basement barn, 26x102; wagon house, 24x40; granary, 14x20; milk house, shop, henery, ice house and store house. House watered by pump, barns by running water, fields by spring and brook. Occupied by owner. Reason for selling, not able to work farm. Price, \$3,200. Terms, \$400 down, with \$100 first year. Address Aden J. Angell, owner, New Berlin, N. Y.

No. 932.— Farm of 74 acres; located 5 miles from New Berlin P. O., R. D. No. 5, and railway station on line of O. & W. and U. V. Rys.;  $\frac{1}{4}$  mile from school; 3 miles from churches and butter factory; 2 miles from cheese factory; 5 miles from milk station and milk condensing plant. Highways, hilly but good. Nearest city, Oneonta, population 9,497, 13 miles distant, reached by highway. Surface of farm, rolling and level, some stone. Altitude, 1,400 feet. Soil, loam. Acres in meadow, 32; in natural pasture, 25; in timber, 17; mostly hardwood, some hemlock. Acres tillable, 45. Fruit, pears, apples, plums, cherries and strawberries. Best adapted to corn, potatoes and oats. Fences, wire, fair condition. House, 6 rooms, fair condition.

Outbuildings: barn 26x48; silo, 8x26; wagon house, 20x30; hen house, 12x24; granary, 10x20, fair condition. Watered by well, creek and springs. Occupied by owner. Reason for selling, owner wants a smaller farm. Price, \$1,400. Address Willis Birdsall, owner, New Berlin, N. Y., R. D. No. 5.

## TOWN OF ROSEBOOM

Population 885

No. 933.— Farm of 160 acres; located  $\frac{1}{4}$  mile from Roseboom P. O.; 4 miles from railway station at Cherry Valley on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school and churches;  $\frac{1}{4}$  mile from milk station. Nearest village, Cooperstown, population 2,484, 10 miles distant, reached by State road. Nature of soil, muck and gravel. Acres in meadow, 80; in pasture, 40; in timber, 30, hemlock, ash and basswood. Acres tillable, 80. Fruit for home use. Best adapted to grain and corn. Fences, barbed wire, good condition. House, 2 stories, 10 rooms, in good condition. Outbuildings: horse barn and wagon house; stable for 25 head; sheep barn; silo; hog house; poultry house. House watered by well; barns, by running water; fields; by springs and creek. Cherry Valley Creek forms boundary on side of farm. Occupied by tenant. Reason for selling, advanced age. Price, \$6,000. Terms, \$3,000 cash, balance on mortgage at 5%. Address Harriet Peeso, owner, Roseboom, N. Y.

## TOWN OF WESTFORD

Population 803

No. 934.— Farm of 211 acres; located 1 mile from Westford P. O.; 8 miles from railway station at Schenevus on line of Delaware & Hudson R. R.; 1 mile from school and churches; 1 mile from cheese factory. Highways, State road. Nearest village, Worcester,  $6\frac{1}{2}$  miles distant, reached by highway. General surface, part hilly. Acres tillable, 180. Large orchard on farm. Best adapted to corn, oats, buckwheat and potatoes. Fences, wire, fair condition. House, large, in good condition. Outbuildings: barn, 60x32; another, 40x25, with basements in both, good condition. Two other barns in fair condition. Silo, 12x28. Occupied by tenant. Price, \$4,000. Terms, one-half down, balance on mortgage. Address C. E. McRorie, owner, Westford, N. Y.

No. 935.— Farm of 100 acres; located  $1\frac{1}{2}$  miles from Westford P. O.; 9 miles from railway station at Schenevus on

line of Delaware & Hudson R. R.;  $1\frac{1}{2}$  miles from school and churches;  $1\frac{1}{2}$  miles from cheese factory. Nearest village, Worcester, 7 miles distant, reached by highway. General surface, part hilly. Acres in timber, 10, maple and beech. Acres tillable, 80. Fruit, for home use. Best adapted to corn, potatoes, oats and buckwheat. House, small, fair condition. Two barns, fair condition. House watered by well. Unoccupied. Reason for selling, owner unable to work farm. Address A. E. Cummings, owner, Westford, N. Y.

#### TOWN OF WORCESTER

Population 2,185

**No. 936.**—Farm of 337 acres; 2 miles from Worcester on line of D. & H. R. R. House and barn old. First-class spring water, also creek. Part cleared, rest being cleared or will be within 4 years, as timber has been sold. Would make a good sheep farm. Price, \$5,000. Address Silas W. Ferguson, owner, Worcester, N. Y.

**No. 937.**—Farm of 170 acres; located 3 miles from railway station at Worcester, on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from Methodist church;  $2\frac{1}{2}$  miles from butter factory, cheese factory, milk station and milk condensing plant. Highways, good. Surface of farm, rolling. Soil, slaty but good. Acres in meadow, 40; in natural pasture, 60; in timber, 40, oak, beech, maple and basswood. Acres tillable, 40. Fruit, 150 trees, good bearing. Best adapted to potatoes, oats, hops and dairying. Fences, wire, good condition. House, 9 rooms, good condition. Outbuildings: basement barn, 36x50; stalls for 22 head of cattle besides horses.

Watered by well, springs and stream. Occupied by tenant. Reason for selling, owner a widow and advanced in years. Price, \$4,500. Terms, part cash, balance on bond and mortgage. Address Lucinda White, owner, Worcester, N. Y. Owner will rent.

**No. 938.**—Farm of 86 acres; located 2 miles from Charlotteville P. O., R. D. No. 3; 5 miles from railway station at Worcester on line of D. & H. R. R.; 1 mile from school; 2 miles from churches; 2 miles from butter factory. Nearest city, Oneonta, population 9,497, 21 miles distant, reached by rail or good highway. General surface, rolling. Altitude, 1,400 feet. Nature of soil, gravelly loam. Acres in meadow, 56; in pasture, 10; in timber, 20, hemlock, maple and beech. Acres tillable, 56. Fruit, 40 apple trees, variety. Best adapted to general farm crops. Fences, stone, board and wire, good condition. House, 2 stories, 24x28, with wing 28x30; wood house, 12x15, good condition. Outbuildings: barn, 30x40; wing for stable and manure shed, 26x36; wagon and horse barn, 24x40, with basement for hogs. House watered by well; barns, by spring and brook; fields, by spring and brook. Occupied by owner. Reason for selling, advanced age. Price, \$3,000. Terms, \$1,000 down, balance to suit purchaser at 5%. Address Geo. W. Smith, owner, R. D. No. 3, Worcester, N. Y., or Melvin A. Smith, agent, Worcester, N. Y.

**No. 939.**—Farm of 105 acres; 2 miles from Worcester P. O. and station, on D. & H. R. R. Good soil. Sixty acres pasture and meadow. No buildings. Spring water. Price, \$1,500. Terms, easy. S. W. Ferguson, owner, Worcester, N. Y.

#### PUTNAM COUNTY

Area, 241 square miles. Population, 14,665. Annual precipitation 54.67 inches. Annual mean temperature, 50.8°. Number of farms, 973. County seat, Carmel.

This county is located in the southeastern part of the state bordering on Connecticut. It is bounded on the west by the Hudson River and is drained by the Croton River and Peekskill Creek.

The surface is hilly and while it presents scenery only a part of the soil is suitable for farming. The Matteawan and Peekskill mountains extend into the western and central parts of the county, while the Taghkanic Mountains are located in the eastern part. Between these ranges is a valley three or four miles wide with black loam soil. This valley extends from the northern border about half way across the county, then broadens into a wide undulating plain containing black and gravelly loam. In the vicinity of Cold Spring and extending east and north is another valley having a clay loam soil. Among its features of interest are the highlands of the Hudson and Lake Mahopac, a popular summer resort. Marble of excellent quality is extensively quarried and rich mines of iron ore are also found. The leading crops are corn, 124,228 bushels; oats, 19,022 bushels; rye, 4,559 bushels;

potatoes, 85,494 bushels; hay and forage, 29,087 tons. Value of all farm property, \$8,851,342, an increase of 14.6 per cent. during the last decade. Domestic animals are as follows: Dairy cows, 8,425; horses, 2,195; swine, 2,392; sheep, 1,220; poultry, 50,167; milk product, 5,080,275 gallons; receipts of dairy products, \$583,016.

The county is traversed by the Harlem and Putnam divisions of the N. Y. C. & H. R. R. R., and the N. Y., N. H. & H. also passes through a portion of the county. There are 56 district schools. Drew Seminary and Female College is located at Carmel. Cold Spring has a large iron plant. Many poultry farms are located in this district. There are six agricultural organizations in the county, the purpose of which is to promote the farmers' interest.

## TOWN OF CARMEL

Population 2,610

No. 940.— Farm of 182½ acres; located 3 miles from Carmel P. O. and railway station on line of N. Y. C. R. R. State road. Surface of farm, rolling. Acres in meadow, 100; in natural pasture, 50; in timber, 30. Acres tillable, 100. Best adapted to hay, grain or garden truck. House, small, fair condition. Outbuildings, good size, fair condition. Watered, house, by well and spring; barns, by spring; fields, by springs and brooks. Occupied by tenant. Reason for selling, owner in other business. Price, \$10,500. Terms, \$5,500 cash, balance on mortgage at 5½%. A fine creek forms entire eastern boundary of farm. Address Mr. Barrett, owner, care Trust Company, Poughkeepsie, N. Y., or H. O. Palen, agent, Highland, N. Y.

## TOWN OF PHILLIPSTOWN

Population 5,345

No. 941.— Farm of 129 acres; 4 miles from Nelsonville P. O., R. D.; 4½ miles from Cold Spring railway station on line of Pennsylvania R. R. and the Hudson river. State road. Soil, clay loam. Acres in meadow, 80; in natural pasture, 37; in timber, 12. House, 56x60, needs some repairing. Barn, 34x43, in fair condition. Watered by springs and 3 wells. Fences, wall, rail and wire, in fair condition. This farm is near lakes, churches, schools and mills and is located amidst most beautiful scenery. The land is good and very productive. Would make a beautiful country residence. Price, \$5,500. Terms, easy. Address George Wright, owner. Cold Spring-on-Hudson, N. Y. Owner will rent.

## TOWN OF PUTNAM VALLEY

Population 924

No. 942.— Farm of 200 acres; located 5 miles from Mahopac P. O.; 4 miles from railway station at Mahopac Falls on line of Putnam railway; 1 mile from school; 1 mile from Methodist church; 4 miles from milk station. Highways, part State road. Nearest city, Peekskill, population 15,245, distant 10 miles, reached by highway and trolley. General surface, rolling. Altitude, 900 feet. Nature of soil, sandy loam. Acres in natural pasture, 75; in timber, 125, all kinds, some virgin. Acres tillable, 70. Adapted to all kinds of crops. Fences, stone, good condition. No buildings. Three fine streams through the property, has fine water power. Price, \$2,000. Terms, one-half cash, balance on mortgage. Address Chas. D. May, owner, Yorktown Heights, N. Y.

No. 943.— Farm of 50 acres, located 3 miles from Baldwin Place P. O. and railway station on line of Putnam railway; 1 mile from school; 2 miles from Union Chapel; 3 miles from milk station. Highways, part State road. Nearest city, Peekskill, population 15,245, distant 7 miles, reached by highway and trolley. General surface, generally rolling. Altitude, 600 feet. Nature of soil, clay and sand. Acres in meadow, 25; in natural pasture, 20; in timber, 5, all kinds. Acres tillable, 30. Fruit, 100 fine apple trees and other fruit. Adapted to all kinds of crops. Fences, stone, in good condition. House, 6 rooms, frame and stucco, in good condition. Outbuildings: good barn and hennery, all in good condition. House and barn watered by well, fields by brook. Occupied by owner. Reason for selling, poor health. Price, \$4,500. Terms, \$2,000 cash, balance on mortgage. Address Chas. D. May, owner, Yorktown Heights, N. Y.

## RENSSELAER COUNTY

Area, 650 square miles. Population, 132,276. Annual precipitation, 42.5 inches. Annual mean temperature, 46°. Number of farms, 3,654. County seat, Troy.

This county is favorably located in the eastern part of the state bordering on Massachusetts on the east and the Hudson River on the west.

The surface is mostly hilly and partly mountainous, the Taconic mountains rising to the height of about 2,000 feet in the eastern part of the county. The Hoosick River Valley divides these into separate ranges.

The soil of this valley is clay and gravelly or slaty loam with hardpan subsoil. The range of hills near the center of the county is excellent for pasturage and dairying, the cultivation of potatoes also bringing good returns. The soil of this section is a conglomerate of sandstone and shale. Between these hills and the Hudson River the land is less rolling and general farming is profitably conducted. The reports on the products of the county are as follows: Corn, 408,503 bushels; oats, 516,979 bushels; buckwheat, 81,974 bushels; rye, 213,343 bushels; potatoes, 1,142,796 bushels; hay and forage, 96,129 tons. The total value of all farm property is \$18,216,934. This is an increase within the last ten years of 19.1 per cent. The average price of improved land in the county is \$35.86 per acre. The buildings in this county are worth one million dollars more than the land. There are farms that can be bought for less than the value of the buildings. Domestic animals are reported as follows: Dairy cows, 19,804; horses, 8,666; swine, 12,081; sheep, 25,190; poultry, 184,489; total production of milk, 10,001,020 gallons; the receipts from dairy products was \$1,198,481. The county is intersected by the N. Y. C. & H. R. R., Fitchburg and the branches of the D. & H. railroads which center at Troy. The Rensselaer Polytechnic Institute, Emma Willard Female Seminary and a Catholic Theological Seminary are located at Troy. The cities of Troy, Rensselaer and Hoosick Falls lie within the county having a united population of about 100,000 people, and furnish a market for the farm products, while Albany and other nearby cities add to the great market facilities of the county. There are two important electric lines from Rensselaer to Hudson and from Troy to Averill Park in the center of the county. There are numerous lakes, ponds and streams of excellent water affording abundant supply. There are 162 district schools, 75 miles of state and county roads, 1,202 miles of graded and improved highways, leaving only 11 miles of highway in the county not improved. The soil and climate are excellent for growing apples and other fruit. The farmers of the county have organized 12 different societies to further their farming interest.

## TOWN OF BERLIN

Population 1,615

No. 944.—Farm of 25 acres, located  $1\frac{1}{4}$  miles from South Berlin P. O.,  $1\frac{1}{2}$  miles from railway station at South Berlin, on line of Rutland Division of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school and milk station;  $1\frac{3}{4}$  miles from Protestant churches and creamery. Highways, good. Nearest city, Pittsfield, Mass., 17 miles distant, population about 30,000, reached by rail and highway. Surface of farm, rolling. Altitude, about 1,500 feet. Soil, gravelly loam. Acres in meadow, 12; in natural pasture, 6; in timber, 7, hardwood, good. Acres tillable, 12. Fruit, 40 apple trees, a few plums and pears. Best adapted to corn, potatoes, oats, hay and berries. Fences, wire and board, good. House, 7 rooms. Outbuildings: barn, 20x26, and several other outbuildings, good condition. Watered, house and barn by spring,

fields by spring and stream. Occupied by owner. Reason for selling, owner advanced in age. Price, \$1,000. Terms, \$400 cash, balance on mortgage at 5%, easy payments. Address Fred Willbrant, owner, South Berlin, N. Y., or A. O. Mattison, agent, South Berlin, N. Y.

No. 945.—Farm of 110 acres; 2 miles from Berlin P. O. R. D. and railway station on line of Rutland R. R.; 2 miles from school and churches; 2 miles from butter and cheese factory and condensing plant. Nearest city, North Adams, Mass., population 25,000, 13 miles distant, reached by rail and highway. General surface, rolling and hilly. Altitude, 1,000 feet. Nature of soil, slate loam. Acres in meadow, 20; in pasture, 80; in timber, 10; maple, beech, birch, and oak. Acres tillable, 75. Fruit, 75 apple, 12 cherry, 12 plum and 10 pear trees. Best adapted to oats, corn, potatoes and buckwheat. Fences, wire, fine

condition. House, 1 story, 11 rooms, good condition. Outbuildings: barn, 24x42; wagon house, 20x26; poultry house, 14x22; hog house, all in good condition. House and barn watered by spring, fields by brook. Occupied by owner. Reason for selling, has another farm. Price, \$1,600. Terms, cash. Address Henry R. Satterlee, owner, Berlin, N. Y.

No. 946.—Farm of 117 acres, located  $1\frac{1}{2}$  miles from Berlin P. O. and railway station on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches and condensing plant. Highways, good. General surface, hilly. Nature of soil, slate and clay loam. Acres in meadow, 40; in natural pasture, 50; in timber, 15, maple, sap bush of 400 trees, some oak. Acres tillable, 65. Fruit, 70 apple, 10 pear and 7 cherry trees, some grapes. Best adapted to corn, oats, potatoes and hay. Fences, wire, fair condition. House, 9 rooms, fair condition. Outbuildings: barn No. 1, 36x40; basement barn, 24x30, silo, woodshed, workshop and 2 poultry houses. House watered by well, barns by spring, fields by springs. Occupied by owner. Reason for selling, old age. Price, \$1,700. Terms, on application. Address C. F. Collins, owner, Berlin, N. Y.

No. 947.—Farm of 200 acres; located 1 mile from South Berlin P. O., R. D. and railway station on line of Rutland Division of N. Y. C. R. R.; 2 miles from school; 4 miles from churches; 4 miles from creamery. Nearest city, Pittsfield, Mass., 18 miles distant, reached by rail and highway. General surface, rolling. Nature of soil, loam. Altitude, 2,000 feet. Acres in meadow, 30; in pasture, 60; in timber, 100, spruce, hemlock, maple and beech. Acres tillable, 50. Fruit for home use. Best adapted to potatoes, oats, buckwheat and hay. Fences, wire, fair condition. House, 4 rooms, fair condition. Outbuildings: 2 barns ample size for farm, in good condition. House and barns watered by spring, fields by stream. Occupied by owner. Reason for selling, ill health. Price, \$1,100. Terms, \$600 cash, balance on mortgage. Address George Steer, owner, South Berlin, N. Y., or A. O. Mattison, broker, South Berlin, N. Y.

No. 948.—Farm of 96 acres; located 2 miles from Berlin P. O., R. D. and railway station on line of Rutland Division of N. Y. C. R. R.; 2 miles from school and

churches; 2 miles from milk condensing plant and cheese factory. Highways, hilly. Nearest village, Hoosick Falls, population 5,532, 14 miles distant, reached by rail and highway. General surface of farm, rolling. Altitude, 1,400 feet. Nature of soil, loam. Acres in meadow, 35; in pasture, 43; in timber, 18, maple saplings. Fruit for home use. Best adapted to hay, oats, buckwheat, potatoes and berries. Fence, wire, fair condition. House, 10 rooms, fair condition. Outbuildings: basement barn with concrete floor, 45x25. Several other buildings. House watered by spring, barns and fields by brooks. Occupied by owner. Reason for selling, other business. Price, \$1,500. Address John Millard, owner, Pittsfield, Mass., or A. O. Mattison, broker, South Berlin, N. Y.

No. 949.—Farm of 114 acres; located  $\frac{1}{2}$  mile from Berlin P. O., and railway station on line of Rutland Division of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school and churches;  $\frac{1}{4}$  mile from condensing plant. Nearest city, North Adams, Mass., population 25,000, reached by rail or highway. General surface, part level, part hilly. Altitude, 1,000 feet. Nature of soil, river bottom loam. Acres in meadow, 30; in pasture, 66; in timber, 18, variety. Acres tillable, 80. Fruit, 40 apple trees, plums, pears and cherries. Adapted to general farm crops. House, 12 rooms, good condition, open fireplaces. Outbuildings: barn with basement 28x30, barn with basement 30x38, silo. House watered by well, barns by stream, fields by spring and streams. Occupied by tenant. Possession given at any time. Reason for selling, advanced age of owner. Price, \$4,000. Terms, \$2,000 cash, balance on mortgage. Address Mrs. A. P. Hull, owner, Berlin, N. Y., or A. O. Mattison, broker, South Berlin, N. Y.

No. 950.—Farm of 156 acres; located 1 mile from South Berlin P. O., and railway station on line of Rutland Division of N. Y. C. R. R.;  $\frac{3}{4}$  mile from school; 1 mile from churches; 1 mile from milk station. Nearest city, Pittsfield, Mass., population 30,000, 17 miles distant, reached by rail or highway. General surface, part hill, part level. Altitude, 1,200 feet. Acres that can be used as meadow, 75; in pasture, 50; in timber, 30, hemlock and maple. Acres tillable, 90. Fruit, 190 apple trees in bearing, plums, pears and cherries. Best adapted to general farm crops. Fences, wire, good condition. House, 11 rooms,

fine condition. Outbuildings: cow barn 30x40 with basement nearly new, horse barn, wagon house, hay barn, all in fine condition. Occupied by owner. Reason for selling, owner has another large farm. Price, \$4,000. Terms, one-half cash, balance on mortgage. Address Peter Reisner, owner, South Berlin, N. Y., or A. O. Mattison, broker, South Berlin, N. Y.

No. 951.—Farm of 266 acres, located  $\frac{1}{2}$  mile from South Berlin P. O.,  $\frac{3}{4}$  mile from railway station, on line of N. Y. C. R. R., Rutland Division; 1 mile from school;  $\frac{3}{4}$  mile from church and  $\frac{3}{4}$  mile from milk station. Highways, good. General surface gently sloping south. Altitude, 1,200 feet. Nature of soil, loam. Acres that can be used as meadow, 80; in natural pasture, 150; in timber, 35, principally maple, large. Acres tillable, 150. Fruit, 40 apple trees, plums, pears and cherries. Best adapted to hay, corn, oats, buckwheat and potatoes. Fences, wire, in good condition. Outbuildings: barns 90x35, 30x20, 34x38, milking shed 84x14, other buildings, all in good condition. House watered by spring, barns by spring and fields by brook. Taconic Mountains,  $1\frac{1}{2}$  miles distant. Occupied by tenant. Reason for selling, other business. Price, \$8,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Sugar bush of 2,000 fine maples and sugar house,  $\frac{1}{2}$  mile of trout brook. Address William Porter, owner, 71st street and Broadway, New York City, or A. O. Mattison, broker, South Berlin, N. Y.

No. 952.—Farm of 70 acres; located  $1\frac{1}{4}$  miles from Center Berlin P. O. and railway station on line of Rutland R. R.;  $1\frac{1}{4}$  miles from school; 2 miles from churches;  $1\frac{1}{2}$  miles from cheese factory;  $1\frac{1}{4}$  miles from milk station; 3 miles from milk condensing plant. Highways, good. Nearest city, Pittsfield, 19 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,500 feet. Soil, slate loam. Acres in meadow, 25; in natural pasture, 20; in timber, 25, maple and beech. Acres tillable, 40. Fruit, apples and cherries. Best adapted to hay, corn, oats, potatoes and buckwheat. Fences, wire, good. House 22x30, new, 9 rooms. Outbuildings: barn 45 feet long with basement for stock and sap house, fair condition. Watered by springs. Occupied by tenant. For price and terms address Mrs. M. H. Bentley, owner, Center Berlin, N. Y.

No. 953.—Farm of 140 acres; located  $1\frac{1}{2}$  miles from Center Berlin P. O. and railway station on line of Rutland R. R.;  $1\frac{1}{2}$  miles from school, cheese factory and milk station; 2 miles from Protestant church; 3 miles from milk condensing plant. Nearest city, Pittsfield, 19 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,500 feet. Soil, slate loam. Acres in meadow, 50; in natural pasture, 40; in timber, 50, maple, beech and birch. Acres tillable, 40. Fruit, apples, pears, plums and cherries. Best adapted to hay, corn, oats, buckwheat, potatoes and berries. Fences, wire, good condition. House 43x30,  $1\frac{1}{2}$  stories. 8 rooms. Outbuildings: basement barn, shed and carriage house, hen house, silo, wood house, granary and sap house. Watered, house and barns by running water, fields by brook and springs. Occupied by owner. Reason for selling, owner in other business. For price and terms address M. H. Bentley, owner, Center Berlin, N. Y.

No. 954.—Farm of 460 acres; 2 miles from Berlin P. O. and railway station at Berlin on line of Rutland Division of the N. Y. C. R. R.; 20 rods from school; 2 miles from churches, cheese factory and condensing plant. Highways, good. Nearest large village, Hoosick Falls, population 5,532, 14 miles distant, reached by rail and highway. Surface, part level, part rolling and part hilly. Soil, gravelly loam. About 100 apple and pear trees. Best adapted to hay, oats, buckwheat and potatoes. Fences, principally wire. Old-fashioned, low house, 12 rooms, good condition. Cow barn, 40x60, posts 22-foot, stanchions and stalls for 60 head of cattle; stone silo, 17x32; horse barn and carriage house, 26x42; shed, 30x34, with hay loft connects the main barn with horse barn; barn, 26x26, with room for 16 head of cattle; storehouse for farm machinery; a hog house, dairy house, ice house and several other buildings; all well constructed, covered with novelty siding and in good condition. Watered by spring and well. Taconic Mountains,  $1\frac{1}{2}$  miles distant. This farm has a sugar bush of 1,000 fine maple trees and sugar house. Also has over 2 miles of trout brook. Occupied by tenant. Reason for selling, owner has other business. Price, \$5,000. Terms, \$2,500 down, balance on mortgage. Address William Greg, owner, Sterling, Colo., or A. O. Mattison, agent, South Berlin, N. Y.



FIG. 313.—HOUSE ON FARM NO. 953, TOWN OF BERLIN, RENSSELAER COUNTY



FIG. 314.—HOUSE ON FARM NO. 968, TOWN OF SAND LAKE, RENSSELAER COUNTY





No. 955.— Farm of 190 acres; located  $1\frac{1}{2}$  miles from Berlin P. O. and railway station on line of Rutland Division of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from condensing plant. General surface, rolling, some parts rough. Altitude 1,200 feet. Highways, hilly but good. Nature of soil, sandy loam. Acres in meadow, 35; in pasture, 50; in timber, 103, young spruce. Acres tillable, 45. Fruit, 100 trees, mostly ungrafted apples. Best adapted to strawberries, potatoes and oats. Fences, stone. House 32x25,  $1\frac{1}{2}$  stories, 6 rooms, good condition. 2 large barns, 4 outbuildings all need some repair. House watered by spring and well; barns, by spring. 174 ft. water front on Lake Kendall. Occupied by tenant. Price, \$2,200. Terms, \$1,500 down, balance on mortgage at 5 per cent. Address, Frank R. Auerhahn, owner, South Berlin, N. Y., Box 13.

No. 956.— Farm of 92 acres, located  $\frac{1}{2}$  mile from South Berlin P. O. and railway station on line of Rutland Division of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{4}$  mile from condensing plant;  $2\frac{1}{2}$  miles from milk station. Highways, level and good. General surface, hilly. Altitude, 800 feet. Nature of soil, sandy loam. Acres in meadow, 35; in pasture, 25; in timber, 32, maple and beech. Acres tillable, 40. Fruit, 70 apple, 4 pear, 20 plum and 3 cherry trees. Best adapted to oats, buckwheat and strawberries. Fences, wire, good condition. House, 34x15, with wing 20x24, poor condition. Large ell-shaped barn, wagon house and woodshed; tool and milk house; sap house with evaporator and 370 buckets. House watered by wells; barns, by running water; fields, by spring. Occupied by owner. Price \$3,000. Terms, \$2,000 down, balance on mortgage at 5%. Price includes horse and many useful tools. Address Frank R. Auerhahn, owner, South Berlin, N. Y., Box 13.

## TOWN OF EAST GREENBUSH

Population 1,350

No. 957.— Farm of 136 acres; located  $2\frac{1}{2}$  miles from East Greenbush P. O. R. D. 2; 2 miles from railway station at Elliott's Crossing on line of Albany & Southern Railway;  $\frac{1}{2}$  mile from school; 2 miles from Methodist church and  $2\frac{1}{2}$  miles from Reformed church. Highways, State and dirt roads. Nearest cities, Albany and Rensselaer. population of Rensselaer being 10,711, and

Albany 100,253,  $3\frac{1}{2}$  miles distant reached by rail and highway. Surface of farm, rolling and level. Soil, mostly dark loam. Acres in meadow, 105; in natural pasture, 118; in timber, 8, consisting of oak, pine and hemlock; acres tillable, 110. Fruit, apples, pears, prunes, cherries and grapes. Best adapted to grain, hay, potatoes, cabbage and corn. Fences, board and wire, most of which are in good condition; 12 room house, in good condition; 1 barn; hay shed; carriage house; wood shed and wash house combined, and hen house. House is supplied with well and spring water; barn, driven well; fields, springs and creek. Occupied by owner. Reason for selling, owner has two farms and can only work one. Price, \$8,000. Terms, cash, preferred; if not, \$3,000 cash and balance on mortgage. Address Jesse Morner, owner, Troy, N. Y., R. F. D. 4.

## TOWN OF GRAFTON

Population 1,019

No. 958.— Farm of 40 acres; located 2 miles from Grafton P. O. R. D.; 7 miles from railway station at Petersburg on line of Rutland R. R.; 2 miles from school and churches. Nearest city, Troy, population 76,813, 16 miles distant, reached by State road. General surface, rolling. Altitude, 1,700 feet. Nature of soil, gravelly loam. Acres in meadow, 20; in pasture, 15; in timber, 5. Acres tillable, 20. Fruit, for home use. Best adapted to poultry and dairying. Fences, poor. No buildings but old house in poor condition. Fields watered by springs. Trout stream runs through farm. Occupied by owner. Price, \$300. Terms, cash. Address A. B. Jones, owner, Cropseyville, N. Y.

No. 959.— Farm of 36 acres;  $3\frac{1}{2}$  miles from Petersburg P. O., and railway station on line of Rutland R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches. Nearest city, Troy, population 76,813, 16 miles distant, reached by rail or highway, State road. General surface, rolling. Altitude, 1,800 feet. Nature of soil, loam. Acres in pasture, 10; in timber, 18, spruce and hardwood. Acres tillable, 8. Best adapted to potatoes and grain. Fences, wire, in good condition. House 40x20. Outbuildings: barn 20x40, ice-house 18x26, wagon house. House and barn watered by well, fields by springs. Occupied by owner. Reason for selling, other business. Price, \$1,800. Terms,

cash. Address E. A. Bennett, owner, R. F. D. Petersburg, N. Y.

No. 960.—Farm of 32 acres, located 11 miles from the city of Troy on lines of D. & H., N. Y. C., B. & M. R. Rs.;  $\frac{1}{4}$  mile from school and church. Highways, State road. Auto bus passes door. Surface, rolling. Altitude, 1,100 feet. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 2, hardwood, etc. Acres tillable, 15. Fruit, apples, pears, cherries, plums, grapes, strawberries and raspberries. Best adapted to potatoes, hay and grain. Fences, mostly wire, good condition. House, 10 rooms, in good condition. Barn, 25x35, good condition, hog house and 2 hen houses. Watered, house by well, barns by well and fields by spring and creek. Occupied by owner. Reason for selling, ill health. Price, \$1,600. Terms, cash. Best adapted for poultry farm. Address A. B. Jones, owner, Cropseyville, N. Y.

No. 961.—Farm of 18 acres; located  $3\frac{1}{2}$  miles from Petersburg P. O. R. D. and railway station on line of Rutland R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches. Nearest city, Troy, population 76,813, 16 miles distant, reached by State road. General surface, rolling. Altitude, 1,800 feet. Nature of soil, loam. Acres in pasture, 8. Acres tillable, 8. Fruit, 100 apple trees. Best adapted to potatoes. Fences, wire, good condition. House 20x40. Wagon house 18x30. Barn 20x25, poor condition. House watered by spring, barn and fields by stream. Occupied by owner. Price, \$800. Terms, cash. Address C. Z. Bennett, owner, R. D. No. 1, Petersburg, N. Y.

No. 962.—Farm of 65 acres; located 4 miles from Grafton P. O.; 4 miles from school and churches. Nearest city, Troy, population 76,813, 16 miles distant, reached by State road. General surface, rolling. Altitude, 1,810 feet. Nature of soil, loam. Acres in timber, 29, spruce and hardwood. Acres tillable, 6; Fences, fair condition, stone and board. Buildings, bad condition. Fields watered by springs. Large lake, one-half mile distant. Price, \$350. Terms, cash. Address A. B. Jones, owner, Cropseyville, N. Y.

#### TOWN OF HOOSICK

Population 8,315

No. 963.—Farm of 120 acres;  $3\frac{1}{2}$  miles from Hoosick Falls P. O., R. D. 3;  $3\frac{1}{2}$  miles from railway station at

Hoosick Falls, on line of B. & M. R. R.;  $\frac{3}{4}$  mile from school;  $3\frac{1}{2}$  miles from churches; 4 miles from butter factory;  $3\frac{1}{2}$  miles from milk station. Highways, good. Nearest large village, Hoosick Falls, population 5,532,  $3\frac{1}{2}$  miles distant, reached by highway. Surface, rolling. Soil, slate. Acres in meadow, 60; in natural pasture, 35; in timber, 25, oak and pine. Acres tillable, 95. Some apple trees. Best adapted to hay, oats, corn, rye, buckwheat, potatoes and beans. Fences, board and braided wire. House, 15 rooms, fair condition. Four barns, hog house, corn house, hen house, wool room, shop, wagon house and tool house. Watered by cistern and wells. Green Mountains 8 miles, Mt. Anthony 6 miles distant. This property is desirable, being situated on high ground with very fine view. Was settled over 100 years ago by an ancestor of the present owner, and has been handed down from father to son. Occupied by owner. Price, \$5,000. Address Merritt C. Ostrander, owner, Hoosick Falls, N. Y.

964.—Farm of 200 acres; located  $1\frac{1}{2}$  miles from Hoosick Falls, P. O. R. D. 3, and railway station on line of Boston & Maine R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{2}$  miles from milk station, Catholic and Protestant churches; 2 miles from butter factory. Highways in good condition. Nearest city, Troy, population 76,813, 20 miles distant, reached by rail and highway. Surface of farm, rolling and level river bottom land. Soil, clay loam, gravelly loam and river bottom soil. Acres in meadow, 135; in natural pasture, 55; in timber, 10, mostly oak, some white wood. Acres tillable, 190. Fruit, cherries, plums, pears, grapes, currants and apples. Best adapted to corn, grain and grass. Fences, board and wire, fair condition. House, large, colonial style, 14 rooms, excellent condition. Outbuildings: horse barn for 9 horses, cow barn, 32 stanchions, 3 storage barns, silo, granary, pig pen, shop, wagon, ice and poultry houses, first-class condition. Watered by well, cistern and springs. Occupied by owner. Reason for selling, advanced age of owner. For price and terms, which will be reasonable, address R. P. Haswell, owner, Hoosick Falls, N. Y.

#### TOWN OF NASSAU

Population 2,115

No. 965.—Farm of 40 acres; located 1 mile from East Nassau P. O.; 2 miles

from railway station at Brainard, on line of Pennsylvania R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{4}$  mile from M. E. church and 6 miles from milk station. Highways, State road. General surface, level. Nature of soil, loam. Acres in meadow, 26; in natural pasture, 10; in timber, 4. Fruit, pears, plums, grapes, cherries and apples. Best adapted to hay, potatoes, oats and corn. Fences, board and wire, good condition. House, 8 rooms, good condition. Barn 36x26, 2 sheds and wagon house. House watered by well, barns by springs. Reason for selling, ill health. Price, \$2,400. Terms, \$1,200 cash, balance on mortgage at 5 per cent. Address Edwin B. Hayes, owner, Brainard, N. Y.

## TOWN OF PETERSBURGH

Population 1,238

No. 966.— Farm of 100 acres; located 4 miles from Grafton Center P. O., R. D. No. 2; 5 miles from railway station at Petersburg Junction on line of Rutland R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches. Highways, good dirt road. General surface of farm, rolling. Altitude, 1,500 feet. Nature of soil, gravelly and sand loam. Acres in meadow, 10; in pasture, 10; in timber, 20, mostly maple. Acres tillable, 60. Fruit, young apple orchard, 20 other trees, apples and pears. Best adapted to hay, grain and corn. Fences, rail and wire. House, 20x32, good condition. Barn, 20x30, good condition. House watered by spring, barn by spring. Occupied by owner. Reason for selling, death in family. Price, \$1,600. Terms, \$1,000 cash, balance on mortgage. Will sell stock and farm implements for \$600 extra. Address A. Tucker, owner, R. F. D., Petersburg, N. Y., or William J. Battin, agent, Watervliet, N. Y.

## TOWN OF POESTENKILL

Population 1,078

No. 967.— Farm of 103 acres; located  $\frac{1}{2}$  mile from Poestenkil P. O., R. D. 1; 5 miles from railway station at Troy on line of N. Y. C. & H. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{2}$  mile from milk station. Highways, good. Nearest city, Troy, population 76,813 reached by rail or highway. Surface of farm, rolling and level. Soil, slate and gravelly loam. Acres in meadow, 40; in natural pasture, 40; in timber, 10, consisting of pine, oak, chestnut and maple. Acres tillable, 60. Fruit,

apples, pears, plums and cherries. Best adapted to corn, potatoes, berries, oats, buckwheat and rye. Fences, wire, in good condition; 10 room house. Barn; wagon house; ice house; 2 hen houses; corn house; pig pen. Watered, house by running water; barn by well; fields by brook. Occupied by owner. Reason for selling, other business. Price, \$5,500. Terms,  $\frac{1}{2}$  down. Address Conrad Palitsch, owner, Wynantskill, R. D. 1, N. Y.

## TOWN OF SAND LAKE

Population 2,128

No. 968.— Farm of 146 acres; 3 miles from West Sand Lake P. O., R. D. 1; 8 miles from city of Troy, population 76,813, on lines of N. Y. C., B. & M. and D. & H. R. R.s;  $\frac{1}{2}$  mile from school; 3 miles from churches. Highways, good. Two trolleys within two miles of farm. Surface of farm, rolling. Altitude, about 500 feet. Soil, gravelly loam. Acres in meadow, 20; in natural pasture, 35; in timber, 30, chestnut, oak, hemlock, hickory, etc. All tillable except woodland. Fruit, apples and pears. Best adapted to hay, grain, potatoes, etc. Fences, wire and rail, fair condition. House, 40x30, 2 stories and attic, brick, good condition, only needs painting. Outbuildings: barn, 42x45, shed attached; wood house; wagon house; store house. Watered by never failing stream. Occupied by owner. Reason for selling, owner wants to retire. This would make an excellent summer residence. Price, \$6,500. Terms, to suit purchaser. Address David H. Lown, owner, West Sand Lake, N. Y., R. D. 1.

## TOWN OF SCHAGHTICOKE

Population 2,780

No. 969.— Farm of 80 acres; located 4 miles from Melrose P. O., R. D. No. 1;  $1\frac{1}{2}$  miles from railway station at Reynolds on line of Boston & Maine R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from milk station. Highways, good. Nearest village, Mechanicville, population 6,634,  $2\frac{1}{2}$  miles distant. Acres in timber, 6, chestnut and pine. Acres tillable, 70. Fruit, 2 small orchards. Best adapted to hay, corn, rye and potatoes. Fences, wire and board. House, 12 rooms, good condition. Outbuildings, 5 good size, all in good condition. House watered by well and cistern, barns by river, fields by springs. Farm located on Hudson River. Reason

for selling, to settle estate. Price, \$4,000. Terms, cash. Address Mrs. J. Milton Osborn, heir to estate, Schaghticoke, N. Y.

No. 970.—Farm of 134 acres, located  $1\frac{1}{2}$  miles from Valley Falls P. O., R. D., and railway station on line of B. & M. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches. Highways in good condition. Surface of farm, slopes to south just enough for drainage. Soil, loam, hard pan sub-soil. All tillable. Fruit, apples, plums, pears, cherries and prunes. Best adapted to general farming or dairying. Fruit enough for own use. House, 10 rooms, first-class condition, running water, bath. Outbuildings: barn, 34x94, first-class condition, tenant house, horse barn, wagon house, tool house, hog house, ice house, hen house, corn house and creamery, nearly all slate roofs. Reason for selling, owner wishes to retire from business. Price, \$70 per acre. Terms, \$2,500 down, balance on mortgage. Address Schuyler Hayner, owner, Valley Falls, N. Y.

#### TOWN OF SCHODACK

Population 4,780

No. 971.—Farm of 265 acres; 4 miles from Castleton P. O.; 1 mile from railway station at Van Hoesen on line of B. & A. R. R.; 1 mile from school. Nearest large village, Castleton, population 1,396, 10 miles from Albany, 18 miles from Troy. Highways, good,  $\frac{1}{4}$  mile from State road. Surface, rolling. Soil, gravelly and sandy loam. Fruit of all kinds, 100 apple trees. Best adapted to grain, hay, potatoes, corn, etc. Fences, 75 acres fenced, in good condition. Houses: one of 3 rooms, in good condition; another of 17 rooms, in excellent condition; and another of 9 rooms, in good condition. Outbuildings: barn 120x40, with 28-foot posts, new roof; one 30x40, with 18-foot posts; and another 24x40, new roof; all other necessary outbuildings, in good condition. Buildings valued at \$12,000. Watered by 2 cisterns, 5 wells, windmill and stream. This property is 4 miles from Hudson river. There are 20 to 30 acres of moulding sand on this farm that can be sold if desired. Occupied by owner and tenant. Reason for selling, owner has other business. Price and terms on application. Address Edson W. Masten, owner, Castleton, N. Y.

No. 972.—Farm of 53 acres, located 3 miles from Castleton P. O.; 2 miles from railway station at South Schodack on

line of B. & A. railway;  $\frac{3}{4}$  mile from school; 3 miles from all churches. Highways, good. Nearest village, Castleton, population 1,396, distance 3 miles, reached by highway. General surface, level and slightly rolling. Nature of soil, clay loam. 7 acres of timber, pine, etc. Acres tillable, 46. Fruit, 75 apple trees about 22 years old and 25 pear trees. Best adapted to grass, rye, oats and corn. Fences, good, board and wire. House,  $1\frac{1}{2}$  stories, 36x72. Outbuildings, in first class shape and ample for farm. House watered by cistern and well, barn by cistern. Three miles from Hudson river. Occupied by owner. Reason for selling, old age. Price, \$4,200. Terms to suit purchaser. Address Joseph Seabury, owner, Castleton, N. Y., or Chas. Van Buren, agent, Castleton, N. Y.

No. 973.—Farm of 105 acres; located  $\frac{1}{8}$  mile from Brookview P. O.,  $1\frac{1}{16}$  mile from railway station at Brookview on line of Boston & Albany R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{8}$  mile from Protestant church;  $1\frac{1}{16}$  mile from milk station. Highways, good. Nearest city, Albany, 9 miles distant, population, 100,253, reached by rail and highway. Surface of farm, hilly, some level. Soil, mostly gravel loam. Acres in meadow, 20; in natural pasture, 30; in timber, 5, hard and soft. Acres tillable, 50. Fruit, 150 apple, 14 pear, 7 peach and 12 cherry trees. Best adapted to hay and grain. Fences, barbed wire, fair condition. House, old but in good condition, 13 rooms, arranged for two families. Outbuildings: two barns, one in good condition and one with poor roof; hog house, poor condition; good corn crib; good woodshed. Watered; house by well and cistern, barn by well, fields by creek. Occupied by tenant. Reason for selling, ill health in family. Price, \$8,000. Terms, \$2,500 down, balance on yearly payments of \$500 at 6 per cent. Address Miss Mary L. Sutliff, owner, New York Public Library School, 476 Fifth ave., New York City. Owner will rent.

No. 974.—Farm of 243 acres; located on line of B. & A. R. R.;  $1\frac{1}{2}$  miles from Van Hoesen Station, R. D. 1 from Castleton; 10 miles from Albany. Highways, good. Soil, deep, fertile, sandy and gravelly loam. Nearly all tillable; about 10 acres of timber. Fruit, 100 apple trees, also pears and grapes. Surface just rolling enough for natural drainage.



**FIG. 315.—BUILDINGS ON FARM NO. 971, TOWN OF SCHODACK,  
RENSSELAER COUNTY**



Soil adapted to general farming, especially grain, potatoes and grass. Fences, wire, board and rail, good condition. There are two sets of buildings on this farm. The first designated as the Home Farm, has house, 22x24, 2 stories, with wing. Wood house, smoke house and other outbuildings, all in first-class condition. Outbuildings, barn, 40x60, recently built, 28 ft. posts; shed, 20x60, 18 ft. posts; wagon house, 25x60, 18 ft. posts, in first-class condition. No. 2 set of buildings has 1½ story house with complete set of outbuildings, all in good condition. Watered by never failing springs, brooks, 3 wells and 2 cisterns. This farm has been in possession of family for a century. It is in first-class condition. The second set of buildings is rented yearly constituting a permanent income for the owner. Fifty acres of farm now being laid out to building lots. Fine bed of moulding sand on farm. Reason for selling, owner a widow and cannot attend to place. For price and terms address Mrs. W. H. Van Vliet, owner, 124 Jay st., Albany, N. Y.

No. 975.— Farm of 135 acres; located 2 miles from Nassau P. O., R. D. No. 1; ¾ mile from railway station at Sweets Crossing on line of Albany & Southern R. R.; 1½ miles from school, Catholic and Protestant churches; 3 miles from butter factory and milk station. Highways, good. This farm is 11 miles from Albany, population 100,253, reached by rail and highway. Surface of farm, rolling. Soil, limestone. Acres in natural pasture, 10; in timber, 8, hardwood. Acres tillable, 120. Fruit, about 200 trees. Adapted to any crop grown in this climate. Fences, wire and stone wall. House, colonial style, 1½ stories, good condition. Outbuildings, horse barn, 49x27; hog house, 24x15; hen house, 11x29; hay barn, 21x30; cow barn, 42x20; main barn, 50x45. Watered by well, cistern and brooks. Occupied by tenant. Reason for selling, ill health. Price, \$7,500. Terms, reasonable. Address Mrs. Amy B. Huested, owner, Nassau, N. Y. Owner will rent.

No. 976.— Farm of 90 acres, located 2 miles from Brookview P. O. and railway station on line of B. & A. R. R.; 2 miles from school, churches and milk station. Highways, gravel, level. Nearest village Castleton, population 1,396, 2 miles distant, reached by rail or highway. Surface of farm, level. Soil, loam and gravel. Acres tillable, 83; in tim-

ber, 7, pine and oak. Fruit, apples, pears, peaches, plums, cherries and grapes, about 80 trees in all. Best adapted to rye, corn and potatoes. Fences, wire, good condition. House, 50x50, 8 rooms, brick, slate roof. Outbuildings: barn 40x50, wagon house and horse stable 25x60, hog house 12x12, hen house 10x10. Watered; house by well and cistern, barns by cistern, fields by well. Occupied by tenant. Price, \$8,000. Terms, \$5,000 cash, balance on mortgage. Address Jacob H. Snook, owner, East Greenbush, N. Y., or Frank H. Knox, agent, 51 State street, Albany, N. Y. Owner will rent with option to buy.

No. 977.— Farm of 118 acres, located 3 miles from Castleton P. O., R. D. No. 1; ¾ mile from Van Hoesens railway station on line of B. & A. R. R.; ¼ mile from school; 3 miles from churches. Highways, good, gravel. Nearest large village, Castleton, population 1,396, reached by rail or highway. Surface of farm, rolling and level. Soil, loam and gravel. Acres tillable, 75; in timber, 23, oak and pine. Fruit, apples, pears, peaches, plums, cherries, quinces and grapes, about 65 trees. Best adapted to corn, rye, potatoes and hay. Fences, wire and board, in good condition. House 50x40, 16 rooms, good condition. Outbuildings: 2 barns each 40x40, wagon house, hog house 12x12, hen house 10x10, ice house, tool house and corn house. Watered: house by well and cistern, barns by well, fields by creek. This farm is 3 miles from Hudson river. Occupied by tenant. Reason for selling, to settle an estate. Price, \$7,000. Terms, \$4,000 cash, balance on mortgage. This farm lies along State macadam road between New York and Albany. Address Emma Shufelt, owner, East Greenbush, N. Y., or Frank H. Knox, agent, 51 State street, Albany, N. Y.

#### TOWN OF STEPHENTOWN Population 1,289

No. 978.— Farm of 200 acres; located 1 mile from Stephentown P. O.; 2 miles from railway station on line of Rutland Railroad. Acres in meadow, 75; in natural pasture, 50; in timber, 75. Acres tillable, 120. Fruit, 150 trees. Occupied by owner. Fences in fair condition. House and barn in good repair. Watered by well. Price, \$2,500. Address Mrs. Mary Robinson, owner, North Stephentown, N. Y.

No. 979.— Farm of 180 acres; located 2 miles from Stephentown P. O., and

railway station on line of Rutland R. R.;  $1\frac{1}{2}$  miles from school and churches; 4 miles from cheese factory; 2 miles from milk station. Highways, State road. General surface, level and rolling. Acres in meadow, 70; in pasture, 60; in timber, 50, chestnut, pine, hemlock and hardwood, 200 sugar maples. Fruit, apples, variety, 75 trees. Best adapted to oats, corn and potatoes. Fences, stone wall and woven wire. House, 28x36, in good condition. Outbuildings: barns, 50x28; 48x48; 18x30; 24x34; 16x24. House and barns watered by piped spring water, fields by brook. Occupied by owner. Reason for selling, advanced age. Price, \$4,000. For stock and tools included, \$5,000, which includes 12 cows, 2 horses, and grain and forage. Address E. P. Quinlan, owner, Stephentown Center, N. Y.

No. 980.—Farm of 3 acres; located  $\frac{3}{4}$  mile from North Stephentown P. O.;  $1/10$  mile from railway station, on line of Rutland Division of N. Y. C. R. R.; 1 mile from school; 3 miles from churches; 3 miles from creamery. Nearest city, Pittsfield, Mass., 13 miles distant, reached by rail or highway. General surface, level. Altitude 1,000 feet. Nature of soil, loam. Acres tillable, 3. Best adapted to berries and poultry. House 7 rooms, needs some repairs. Woodshed, hen house, need some repairs. House watered by well. Occupied by owner. Reason for selling, owner a widow. Price, \$400. Terms one half cash, balance on mortgage. Address, Clara Gardner, owner, Petersburg, N. Y. or A. O. Mattison, broker, South Berlin, N. Y.

### ROCKLAND COUNTY

Area, 200 square miles. Population, 46,875. Annual precipitation, 51.73 inches. Annual mean temperature,  $48^{\circ}$ . Number of farms, 1,133. County seat, New City. This county is located in the southeastern part of the state bordering on New Jersey. The Hudson river forms its boundary on the east and it is drained by the Ramapo and Hackensack Rivers.

The surface is mostly hilly or mountainous. In the western part are found the Ramapo Mountains, which are steep, rocky and barren. The southern part of the county and the level valley of the Hackensack River lying back of the Highlands of the Hudson contain a very fertile soil of sandy loam and in this locality dairying, poultry raising and vegetable and small fruit growing are conducted with great profit. Extensive deposits of clay and sand are found along the shores of the Hudson and brick-making is a leading industry. The crops reported are as follows: Corn, 81,576 bushels; oats, 17,680 bushels; rye, 13,826 bushels; potatoes, 66,909 bushels; hay and forage, 11,224 tons. The value of all farm property is \$11,194,649, an increase of 98.9 per cent. over the value of 1900. This increase of \$58.70 per acre represents the largest per cent. of gain in farm property of any county in the State, except Westchester. The average value of improved land in the county is \$185 per acre. Domestic animals on 958 farms are as follows: Dairy cows, 2,266; horses, 2,040; swine, 1,200; sheep, 421; poultry, 71,792; production of milk, 1,140,804 gallons, which sold for \$148,179. There are no milk stations or factories in the county, the milk being shipped direct to New York City, which is only 32 miles from the county seat. Much trap rock is quarried in this region, where it is crushed for use in road making or mixed with cement for concrete structures. There are 47 district schools in the county. The agricultural organizations consist of one grange, one county agricultural association and a county industrial association.

#### TOWN OF CLARKSTOWN.

Population 7,980

No. 981.—Farm of 7 acres; located  $\frac{1}{2}$  mile from New City P. O., and railway station on line of W. S. R. R.;  $\frac{1}{4}$  mile from school and churches;  $\frac{1}{2}$  mile from butter factory;  $\frac{1}{4}$  mile from milk station. Nearest city, New York, 32 miles distant, reached by rail or highway. General surface, slightly rolling. Altitude, 300 feet. Nature of soil, silt loam. Acres tillable, 7. Fruit, large

apple orchard. Best adapted to truck gardening. Fences, wire in good condition. House, new, 6 rooms, all conveniences, 3 large poultry houses, barn and tool house, 3 incubators. House and barn watered by running water, fields by springs. Near Hudson river. House has own gas plant. Reason for selling, owner wants large farm. Price \$5,500. Terms, part cash. There are also 3 colony houses on this place. Address Mr. A. P. Hubbell, owner, New City,



FIG. 316.—BUILDINGS ON FARM NO. 975, TOWN OF SCHODACK, RENNELAER COUNTY



N. Y., or J. P. Christensen, agent, 320 Fifth Ave., New York City.

#### MISCELLANEOUS

No. 982.— Farm of 127 acres, located 2 miles from Roscoe P. O. R. D., and railway station, on line of O. & W. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 2 miles from butter factory; 2 miles from cheese factory; 2 miles from milk station and condensing plant. Highways, good. General surface, level. Altitude, 1,800 feet. Nature of soil, sandy. Acres in meadow, 40; in natural

pasture, 60; in timber, 27, hardwood. Acres tillable, 25. Fruit, 216 apple and 4 pear trees. Best adapted to hay, oats, wheat, etc. Fences, barbed wire, good condition. House, 86x28x36, good condition. Outbuildings: barn, milk house, ice house, cottage, sap house, poultry house, good condition. Watered: house piped from spring, fields, by trout stream. Reason for selling, poor health. Price, \$11,500. Terms, cash. This place has been used as boarding house, accommodating 100 people. Address Frederic A. Swick, owner, Roscoe, N. Y.

#### ST. LAWRENCE COUNTY

Area, 2,296 square miles. Population, 89,005. Annual precipitation, 34.85 inches. Annual mean temperature, 49.3°. Number of farms 8,224. County seat, Canton.

This county is located in the northern part of the state bounded on the northwest by the St. Lawrence River which separates it from Canada. The land area in this county is the largest in the state. It is intersected by Indian, Grass, Oswegatchie, Raquette and St. Regis rivers.

The surface is mostly hilly except a strip about eighteen miles wide which extends along the St. Lawrence River, the soil of which is rich clay loam. In the southeastern section are the foothills of the Adirondacks, which consist of a series of hills and deep valleys. In these valleys we find a dark slaty and gravelly loam. The hills extend in broad ridges, the soil of which is a fertile clay loam. About 700,000 acres in the county are covered with forests of pine, sugar maple oak, birch, elm, beech, and other trees. Among the minerals are granite, iron ore, lead, limestone and Potsdam sandstone. Among the crops produced in this county are: corn, 315,811 bushels; oats, 1,792,670 bushels; potatoes, 1,184,162 bushels; barley, 75,975 bushels; buckwheat, 63,916 bushels; hay and forage, 412,612 tons. The value of all farm property, improvements, tools and live stock is \$49,975,175. This represents an increase of 39.6 per cent. over the valuation shown in 1900. The average value of improved land per acre is \$36.39. The number of domestic animals are: dairy cows, 100,537; horses, 22,665; swine, 33,935; sheep, 18,513; poultry, 315,991. The county leads in the production of milk, hay and forage; the production of the former being 47,654,538 gallons, the value of which with the products of 158 milk stations and factories was \$4,435,441. Lumber is one of the chief exports as is also maple sugar. The county is intersected by the Central Vermont, R., W. & O. and Grand Trunk railroads. At Canton is located the St. Lawrence University (Universalist). A state normal school is located at Potsdam. Massena Springs is a well known watering place. The large towns and the numerous smaller villages with many manufacturing towns in New England and New York City furnish unlimited markets for all the products. There are 375 district schools in the county, 69 miles of state and county roads, 3,149 miles of other improved highways. Forty-six agricultural organizations conserve the agricultural interest of the county.

#### TOWN OF BRASHER

Population 2,179

No. 983.— Farm of 100 acres; located  $2\frac{1}{2}$  miles from Brasher Falls P. O., and railway station at Winthrop on line of Rutland R. R.;  $2\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from butter factory, and  $3\frac{1}{2}$  miles from milk station. Highways, sandy, fair condition. General surface of farm, level. Nature of soil, sandy. Acres that can be used as meadow, 25; in natural pasture, 10; in timber, 10, beech and spruce.

Acres tillable, 55. Fruit, some apples. Best adapted to general crops. Fences, rail and wire. House, large and in good condition. Barn in good condition. House and barn watered by well, fields by creek. Occupied by owner. Reason for selling, death in the family. Price, \$3,500. Terms, cash. Address, George Palton, owner, Brasher Falls, N. Y.

No. 984.— Farm of 35 acres; located 1 mile from Brasher Falls P. O., and 2 miles from railway station at Winthrop, on line of Rutland R. R.; 1 mile from

school; 2 miles from churches;  $1\frac{1}{2}$  miles from butter factory;  $1\frac{1}{2}$  miles from cheese factory and 2 miles from milk station. Highways, improved stone this year. Nearest village, Brasher Falls, population 570, 1 mile distant, reached by highway. General surface, rolling. Nature of soil, sandy loam. Acres that can be used as meadow, 15; in natural pasture, 15; in timber, 5, second growth, maple. Best adapted to general crops. Fences, rail. House, 18x24, with flat roof. Outbuildings: barn, 24x30, with lean-to, stable for 12 cows and 2 horses. House and barns watered by well, fields by creek. Reason for selling, old age. Price, \$1,700. Terms, cash. Address Miss Hannah H. O'Brien, owner, Brasher Falls, N. Y.

## TOWN OF CANTON

Population 6,151

No. 985.—Farm of 140 acres;  $\frac{3}{4}$  mile from Eddy P. O.; 4 trains on N. Y. C. stop daily within 40 rods of house. Highways, good; State road. Clay loam soil. Acres in meadow, 70; natural pasture, 50; timber, 20, maple and beech; acres tillable, 120. Fruit, apples, also currants and berries. Occupied by tenant. Fences, woven wire and rail, good condition. House, 19x30, good cellar, good condition. Large barn, 126 feet long, with stable underneath, concrete floor; granary, and new milk house with concrete floor, in good condition. Watered by well and brook. This farm will keep 30 cows and team of horses and have hay to sell. For price and terms, address C. T. Humphrey, owner, Canton, N. Y., R. F. D.

## TOWN OF DEKALB

Population 2,516

No. 986.—Farm of 100 acres; located 4 miles from DeKalb Junction P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; 1 mile from school; 4 miles from churches;  $\frac{3}{4}$  mile from cheese factory; 4 miles from milk station and 8 miles from condensing plant. Highways, good. General surface, rough. Nature of soil, clay. Acres that can be used as meadow, 25. Acres tillable, 30. Best adapted to grain. Fences, in bad condition. Fair sized house. Large barn in good condition. House, barn and fields watered by wells. Occupied by owner. Address John Humphrey, owner, Canton, N. Y.

## TOWN OF FINE

Population 2,234

No. 987.—Farm of 100 acres; located  $1\frac{1}{4}$  miles from Oswegatchie P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school and churches;  $1\frac{1}{2}$  miles from cheese factory. General surface, rolling. Altitude, 1,376 feet. Nature of soil, gravel loam. Acres in meadow, 40; in pasture, 60. Acres tillable, 40. Fruit, 25 apple trees. Best adapted to corn, oats and potatoes. Fences, barbed wire, good condition. House, 18x24, with wing 16x20, good condition. Barn 30x40, barn 14x20, good condition. House watered by well, barn and fields by creek. Occupied by tenant. Price, \$1,500. Address E. Colton, owner, Oswegatchie, N. Y.

No. 988.—Farm of 177 acres; located 6 miles from Oswegatchie P. O., R. D. No. 1, and railway station, on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school; 4 miles from Methodist church. Highways, good but hilly. Nearest village, Carthage, population 3,563, reached by rail or highway. General surface, rolling. Altitude, 1,200 feet. Nature of soil, gravel. Acres that can be used as meadow, 77; in natural pasture, 100. Acres tillable, 77. Best adapted to hay, oats, corn and potatoes. Fences, barbed wire, good. House, 18x26, with wing 16x24, fair condition. Barn, 40x80, good condition. House watered by hydraulic ram, barns by same and fields by spring. Occupied by owner. Price and terms on application. Address Hubert Scott, owner, Oswegatchie, N. Y.

No. 989.—Farm of 200 acres; located 2 miles from Oswegatchie P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.; 2 miles from school; 1 mile from churches; 1 mile from cheese factory. Highways, good but hilly. Altitude, 1,400 feet. Nature of soil, stony. Acres in meadow, 40; in pasture, 100; in timber, 60. Acres tillable, 40. Best adapted to oats, corn and potatoes. Fences, barbed wire, good condition. House, 18x24, wing, 14x20, good condition. Barn, 30x72, good condition. Occupied by owner. Price on application. Address E. Hubbard, owner, Oswegatchie, N. Y.

No. 990.—Farm of 155 acres; located 4 miles from Oswegatchie P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.;  $1\frac{1}{2}$  miles from school;  $3\frac{1}{2}$  miles from churches; 3 miles from

cheese factory. Highways, hilly but good. Nature of soil, gravel. Acres in meadow, 55; in pasture, 75; in timber, 25, maple. Acres tillable, 55. Fruit, 50 apple trees. Best adapted to oats and potatoes. Fences, barbed wire, poor condition. House, 26x24, fair condition. Barn, 24x36; barn, 30x50, fair condition. House watered by well, barns by well, fields by creek. Oswegatchie River,  $\frac{1}{2}$  mile distant. Occupied by owner. Price on application. Address Alec Thompson, owner, Oswegatchie, N. Y.

No. 991.— Farm of 159 acres; located  $2\frac{3}{4}$  miles from Oswegatchie P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.;  $\frac{3}{4}$  mile from school; 2 miles from churches; 2 miles from cheese factory. Highways, good but hilly. General surface of farm, rolling. Altitude, 1,450 feet. Nature of soil, gravel loam. Acres in meadow, 40; in pasture, 95; in timber, 20, maple. Acres tillable, 40. Fruit, 30 apple trees. Best adapted to corn, potatoes and oats. Fences, barbed wire, good condition. House, 18x26, with wing 14x24, good condition. Barn, 26x36; barn, 30x55, good condition. House and barns watered by well, fields by springs. Occupied by owner. Price on application. Address George Ward, owner, Oswegatchie, N. Y.

No. 992.— Farm of 279 acres; located  $2\frac{1}{2}$  miles from Oswegatchie P. O., R. D. No. 1, and railway station on line of N. Y. C. R. R.;  $2\frac{1}{2}$  miles from school and churches;  $2\frac{1}{2}$  miles from butter and cheese factory. Highways, hilly but good. Altitude, 1,525 feet. Acres in meadow, 80; in pasture, 75; in timber, 121. Acres tillable, 75. Best adapted to oats and potatoes. Fences, barbed wire, good condition. House, 23x36, wing 20x20, good condition. Barn, 40x60, good condition. House and barn watered by hydraulic ram, fields by creek. Turin Lake, 1 mile distant. Occupied by owner. Price on application. Address Lyndon Kelly, owner, Oswegatchie, N. Y.

#### TOWN OF MADRID

Population 1,457

No. 993.— Farm of 164 acres; located about 1 mile from Madrid P. O., R. D. 2, 1 mile from railway station at Madrid Springs, on line of Rutland R. R.; 1 mile from school, churches, butter factory and milk station; 7 miles from cheese factory; 10 miles from milk condensing plant. Highways, good. Nearest city, Ogdensburg, population 15,933, 17 miles distant, reached by rail

and highway. Surface of farm, level and slightly sloping. Altitude, about 300 feet. Soil, loam. Acres in timber, 32, 7 acres of which are fine maple-sugar bush, remainder elm, pine, ash, cedar, spruce, oak, basswood, beech, and birch, first and second growth. Acres tillable, 124. Fruit, 50 apple trees. Best adapted to dairying, hay, corn, barley, wheat, buckwheat, potatoes, etc. Fences, stone and rail, in good condition. House,  $1\frac{1}{2}$  stories, 11 rooms and large wood shed attached, good condition. Outbuildings, barn,  $45\frac{1}{2}$ x100, built in 1898, shed attached, one old barn, granary, hog and hen house, store house with smaller wood shed attached and sugar house. Watered, house, by well and cistern; barn, by well; fields, by springs. Occupied by tenant. Reason for selling, owner a teacher and cannot attend to farm. Price, \$55 per acre. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 5%. Address Miss Edith M. Hall, owner, Madrid, N. Y. Owner will rent with option to buy.

No. 994.— Farm of 135 acres; located  $1\frac{1}{4}$  miles from Madrid P. O.;  $2\frac{1}{2}$  miles from railway station at Madrid Springs, on line of Rutland R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{4}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory and  $2\frac{1}{2}$  miles from milk station. Highways, crushed stone, good. Nearest city, Ogdensburg, population 15,933, 22 miles distant, reached by rail or highway. General surface, rolling. Altitude, about 600 feet. Nature of soil, clay and sand loam. Acres that can be used as meadow, 35; in timber, 12, mostly sugar maple. Fruit, enough apples for family use. Best adapted to hay, oats, potatoes and corn. Fences, rail and wire, in good condition. House, frame, 2-stories, 8 rooms, cistern, good condition. Outbuildings: main barn 36x46, 12 stanchions, horse barn 28x40, smaller barn 32x42, granary 12x20, hog pen, poultry house. House, barns and fields watered by well. Grass River, 1 mile distant. Occupied by owner. Reason for selling, old age. Price, \$8,000. Terms, \$4,000 cash, balance on mortgage at 5%. For \$2,000, will sell 15 cows, 3 horses, farm machinery, hay, grain, straw, poultry, etc. Address Alex Liddle, owner, R. D., Madrid, N. Y., or Russell Real Estate Co., brokers, 73 State st., Ogdensburg, N. Y.

No. 995.— Farm of 153 acres; located 1 mile from Madrid P. O., and 2 miles from railway station at Madrid Springs, on line of Rutland R. R.;  $\frac{3}{4}$  mile from

school and 1 mile from High School; 1 mile from churches and 2 miles from milk station. General surface, level. Nature of soil, clay loam with clay subsoil. Acres in timber, 5, 1st and 2nd growth. Acres tillable, 140. Fruit, apple orchard for family use. Best adapted to hay, grain, potatoes and corn. Fences, rail and wire. 2-story house, 12 rooms, brick veneer. Outbuildings: large gambrel roof barn (built 6 years) 30 stanchions, 4 single stalls and 1 box stall horse barn connected, hog pen, wagon shed, granary, ice house, main barn painted, stable floors, concrete, good condition. House and barns watered by well, fields by river and spring. Occupied by tenant. Reason for selling to settle an estate. Price, \$12,000. Terms, \$4,000 down, balance at 5%. Price includes 23 cows, milk wagon, spring tooth harrow, hand plow, cultivator, horse rake, mowing machine, and fodder except grain. Address Mrs. Mahlon Fay, owner, Madrid, N. Y., or The Russell Real Estate Co., brokers, 73 State st., Ogdensburg, N. Y.

## TOWN OF MORRISTOWN

Population 1,888

No. 996.—Farm of 50 acres; located 2 miles from Brier Hill P. O., and  $3\frac{1}{2}$  miles from railway station at Morristown on line of N. Y. C. R. R., 80 rods from school, 2 miles from churches and 80 rods from cheese factory. General surface, level. Nature of soil, black muck with clay subsoil. Acres that can be used as meadow, 18. Acres tillable, 40. Fruit, 12 acres. Best adapted to corn, hay, grain, etc. Fences, wire, good condition.  $1\frac{1}{2}$ -story house, 8 rooms, painted, good condition. Outbuildings: barn 30x40, gambrel roof, 3 single stalls, 1 box stall; cow barn 18x30, 10 stanchions; hog, 12x12; tool shed, 14x14; granary, 14x10; square silo; main barn painted, concrete floors in good condition. House and barns watered by well, fields by spring and 2 wells. Occupied by owner. Price, \$3,000. Terms, \$1,000 cash, balance at 5%. Will sell for \$750 more; 2 horses, 4 cows and all farm implements. Address S. G. Livingston, owner, R. D., Morristown, N. Y., or The Russell Real Estate Co., brokers, 73 State st., Ogdensburg, N. Y.

## TOWN OF OSWEGATCHIE

Population 2,235

No. 997.—Farm of 80 acres; located 8 miles from Ogdensburg P. O. and rail-

way station, on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{3}{4}$  mile from Presbyterian church and cheese factory; 4 miles from milk station. Highways, mostly stone,  $2\frac{1}{4}$  miles to State road. Nearest city, Ogdensburg, population 15,933, 8 miles distant, reached by highway. Soil, clay loam. Acres in meadow, 30. Acres tillable, 80. Fruit, small orchard for family use. Best adapted to hay, corn and oats. Fences, rail and wire. Large house, first-class condition. Outbuildings, 3 barns, silo, hen house and hog pen, all in good condition. Watered by well. Occupied by owner. Reason for selling, owner a widow. Price, \$3,000. Terms, \$3,500 down, balance on mortgage at 5% interest. Address Mrs. Josephine Sharp, owner, R. D., Ogdensburg, N. Y., or Russell Real Estate Co., 73 State street, Ogdensburg, N. Y.

No. 998.—Farm of 174 acres, located 5 miles from Morristown P. O., and railway station on line of N. Y. C. R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{2}$  miles from church;  $1\frac{1}{2}$  miles from cheese factory and 5 miles from milk station. Highways, stone. Nearest city, Ogdensburg, population 15,933, 9 miles distant, reached by highway. General surface, level. Nature of soil, clay and gravel loam. Acres in meadow, 50; in natural pasture, 8; in timber, 26, 1st and 2nd growth. Acres tillable, 142. Best adapted to corn, hay, grain, potatoes, etc. Fences, rail and wire, good. House,  $1\frac{1}{2}$  stories, 8 rooms, cistern, 2 verandas, piped for furnace, hardwood floor in parlor, good condition. Outbuildings: barn, 33x67, gambrel roof, 30 stanchions, 1 box stall; horse barn, 26x40, 5 single stalls; 2 other barns, 26x36, 30x40; hog pen 18x23; poultry house 14x18; wagon shed 13x40; granary 18x24; square silo, all barns painted and concrete floors. House, barns and fields watered by well. Occupied by owner. Reason for selling, poor health. Price, \$14,000. Terms, \$5,000 cash, balance on mortgage for 10 years at 5%. Address Milford Smithers, owner, R. D., Ogdensburg, N. Y., or The Russell Real Estate Co., brokers, 73 State st., Ogdensburg, N. Y.

## TOWN OF PARISHVILLE

Population 1,785

No. 999.—Farm of 598 acres; 5 miles from Potsdam, R. D. Good, rich soil. Sixty acres of timber. A fine farm in

good location. Large stone house, in good repair. Main barn, 165 feet long; several other barns and outbuildings, all good; 5 milking machines and gas engine. Watered by springs. Well fenced. Price, \$21,000, including about 100 head of cattle. Address P. J. Clark, owner, Parishville, N. Y.

No. 1000.— Farm of 150 acres; located  $4\frac{1}{2}$  miles from Potsdam P. O. and railway station on line N. Y. C. R. R.;  $1\frac{1}{4}$  miles from school;  $4\frac{1}{2}$  miles from churches and  $\frac{1}{2}$  mile from butter factory. Highways, State road. Nearest city, Potsdam, population 8,725,  $4\frac{1}{2}$  miles distant, reached by highway. General surface, 200 acres level, 300 rolling. Nature of soil, heavy loam with clay subsoil. Acres in timber, 50, 1st growth, hardwood. Acres tillable, 200. Fruit, 20 apple trees. Best adapted to all kinds of crops. Fences, rail and wire. 2-story house, 15 rooms, painted, good cellar, running water in house. Outbuildings: barn 40x165, gambrel roof, 69 stanchions; horse barn 40x60, with 8 single stalls, 3 box stalls, good condition; grain barn, tool barn, poultry house, hog pen, all buildings painted and in good condition. Spring water piped to house and barns. Occupied by tenant. Reason for selling, other business. Price, \$21,000. Terms, \$7,000 cash, balance on mortgage at 5%. Price includes 75 cows, 25 head of young cattle, manure spreader, milk wagon, 100,000 cedar shingles, separator, gas engine, 5 milking machine and hay scales. Address P. J. Clark, owner, Parishville, N. Y., or The Russell Real Estate Co., brokers, 73 State st., Ogdensburg, N. Y.

## TOWN OF POTSDAM

Population 8,720

No. 1001.— Farm of 220 acres; located  $2\frac{1}{2}$  miles from Potsdam P. O. and railway station on line of New York Central R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from cheese factory and milk station. General surface, rolling but not hilly. Nature of soil, clay loam with clay subsoil. Acres in meadow, 70; in pasture, 65; in timber, about 20, both 1st and 2d growth. Acres tillable, 135. Fruit, 60

to 70 apple trees of different varieties; about 200 maples in sugar bush. Best adapted to hay, corn, oats, potatoes, etc. Fences, rail and wire, in good condition. House, 8 rooms, concrete cistern, large woodshed, needs painting. Outbuildings: basement barn, 110x40, 48 stanchions, horse stable, carriage room over stable; grain barn, 30x40, hog pen, 16x20, poultry house, hay barn, 20x20, and corn crib. House watered by 2 wells, barn by well and fields by never failing spring. Occupied by owner and son, as tenant. Reason for selling, owner too old to look after it. Price, \$11,000. Terms, \$5,000 down, balance at 6% for term of years. This price includes 18 cows and all apparatus for making maple sugar. Tenant owns balance of dairy. Address George Thompson, owner, Potsdam, N. Y., or The Russell Real Estate Co., agents, 73 State st., Ogdensburg, N. Y.

## TOWN OF WADDINGTON

Population 1,888

No. 1002.— Farm of 53 acres; located 5 miles from Lisbon Center P. O. and railway station on line of Rutland R. R.; 1 mile from School; 6 miles from High School;  $2\frac{1}{2}$  miles from churches;  $3\frac{1}{2}$  miles from cheese factory and milk collected at the door. Highways, stone and dirt. Nearest village Madrid, 6 miles distant, reached by highway. General surface, level. Nature of soil, clay loam and clay subsoil. Acres in meadow, 9; in natural pasture, 25; in timber, 8, enough for family use. Acres tillable, 30. Fruit, some young trees. Best adapted to hay, grain, corn and potatoes. Fences, rail and wire.  $1\frac{1}{2}$ -story house, 7 rooms, painted, cistern, concrete bottom cellar, good condition. Outbuildings: barn 40x70, 8 stanchions, 3 single stalls, 1 box stall, good condition; poultry house 18x24; shop 16x20. House and barns watered by well, fields by spring and well. Occupied by owner. Price, \$3,200. Terms, \$1,500 cash. For \$4,000 will include 8 cows, 1 heifer, 2 calves, 1 horse and all farm implements. Address John Robson, owner, R. D., Lisbon, N. Y., or The Russell Real Estate Co., brokers, 73 State st., Ogdensburg, N. Y.

## SARATOGA COUNTY.

Area, 800 square miles. Population, 61,917. Annual precipitation, 35.41 inches. Annual mean temperature, 47°. Number of farms, 3,611. County seat, Ballston Spa.

This county is located in the eastern part of the state, bounded on the east by the Hudson River and on the south by the Mohawk River, and is intersected by the

Sacandaga River in the northwestern portion. The northern part of the county is tillable in the Sacandaga Valley and along the Hudson River. Toward the center of the county the surface becomes less rugged and is adapted to pasturage and dairying, the soil being a sandy and gravelly loam. To the southwest most of the soil is slate and clay loam and to the southeast clay loam predominates. In the latter section there are quite a number of sand spots which are not fertile.

The surface is extensively covered with forests of ash, beech, elm, chestnut, hickory, oak and sugar maple. The county contains several lakes, Saratoga Lake and Jenny Lake being the largest. Some of the leading crops are corn, 482,561 bushels; oats, 435,812 bushels; buckwheat, 130,163 bushels; rye, 103,261 bushels; potatoes, 579,652 bushels; hay and forage, 75,421 tons. The value of all farm property is \$15,960,106. The average value of farm lands per acre is \$15.47 and of improved land, \$32.03; a slight gain over the values of 1900. The domestic animals number: dairy cows, 16,224; horses, 8,115; swine, 10,612; sheep, 11,483; poultry 178,318; production of milk was 7,203,456 gallons which with its products sold for \$726,945.

The county is intersected by the Champlain Canal, the Delaware and Hudson, Fitchburg and Mt. McGregor railroads. The southeastern part of the county is traversed by electric lines from Saratoga to Schenectady, Albany, Troy, Mechanicville and Fort Edward. Most of the products of the county are demanded by the local markets of Saratoga Springs, Ballston Spa, etc. Saratoga Springs is one of the most fashionable summer resorts in the world. Here are more than twenty mineral springs, some of which are of great celebrity and are of recognized medicinal value. These springs are now owned by the state, being one of the results accomplished in the movement for the conservation of the natural resources of the state now being rapidly developed. The county contains 195 district schools, 74 miles of state and county roads, 1,011 miles of improved highways; and 18 agricultural organization are aiding the individual farmers throughout the county.

#### TOWN OF CORINTH

Population 3,102

No. 1003.—Farm of 80 acres; 1 mile from Palmer P. O.; 3 miles from Corinth railway station, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Saratoga Springs, population 12,693, 12 miles distant, reached by rail and highway. One mile from State road. Surface of farm, rolling and level. Soil, sandy loam and clay. Acres in meadow, 30; in natural pasture, 35; in timber, 15, pine, hemlock, hard wood; acres, tillable, about 50. Fruit, 40 apple trees, cherries, strawberries and grapes. Young orchard of 50 trees. Sugar maple orchard of about 150 trees. Best adapted to potatoes, corn, gardening, etc. Fences, wire and rail, fair condition. House, 2 stories, good condition, main part, 22x32, kitchen and woodshed, 18x26. Outbuildings: barn, 30x40; barn, 28x30; barn, 28x32; good condition; 2 hen houses; hog pen; sugar house; well house, new silo, and other outbuildings. Watered, house, by well and cistern; barns, by well and spring; fields, by running water. This farm is on telephone and R. D. line. Good home market. It is  $\frac{3}{4}$  mile from Hudson river; 3 miles from Lake Boneta; 5 miles from several other lakes. Occupied by owner. The International pulp and paper mills are located near farm, so there is good

market. Reason for selling, poor health of owner. Price, \$4,000. Terms, \$2,500 cash, remainder on mortgage. Address Mrs. William B. Storey, owner, Corinth, N. Y., R. D. 1.

No. 1004.—Farm of 180 acres; located  $2\frac{1}{2}$  miles from Corinth P. O., R. D. 1; 4 miles from Corinth railway station, on line of D. & H. R. R.; 1 mile from school;  $\frac{1}{4}$  mile from churches; 6 miles from butter factory. Population of Corinth, 2,166, reached by State highway. Altitude, 200 feet. Nature of soil, sandy loam. Acres that can be used as meadow 50; in pasture, 90; in timber, 40, hemlock, beech, maple, basswood and chestnut. Acres tillable, 60. Fruit, 4 old orchards; 200 young trees in new orchard. Best adapted to dairying and general farming. Occupied by owner. Fences, mostly wire, in good condition, others not so good. House, new, stone and concrete, 2 stories, 49x60, wing 29x32. Outbuildings: stone horse barn, 38x60; stone cow barn, 45x68; stone sheep barn, 39x27, all new, in good condition, partly unfinished. House watered by drilled well, fields by streams. Occupied by owner. Reason for selling, death of son and daughter, who were most interested. Price, \$20,000. Terms cash, possibly might take mortgage for part. Address M. L. Davis, owner, R. D. 1, Corinth, N. Y.

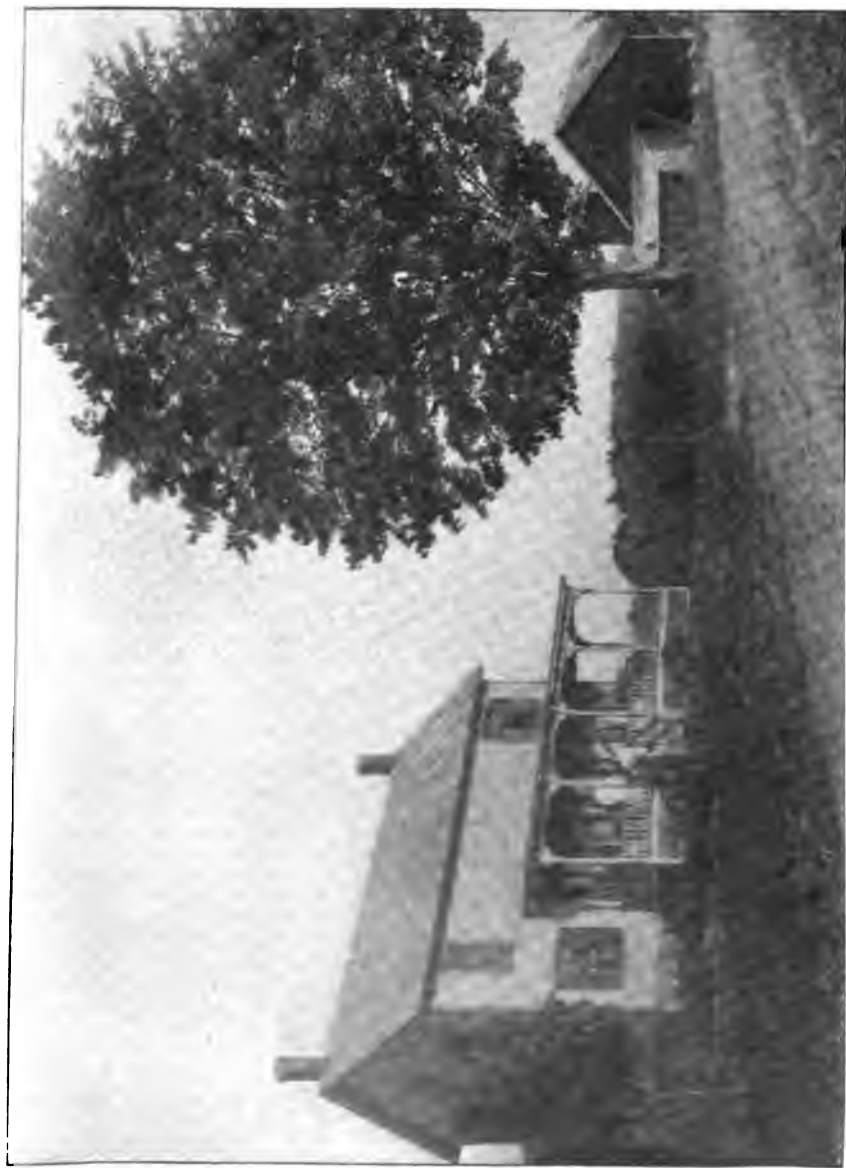
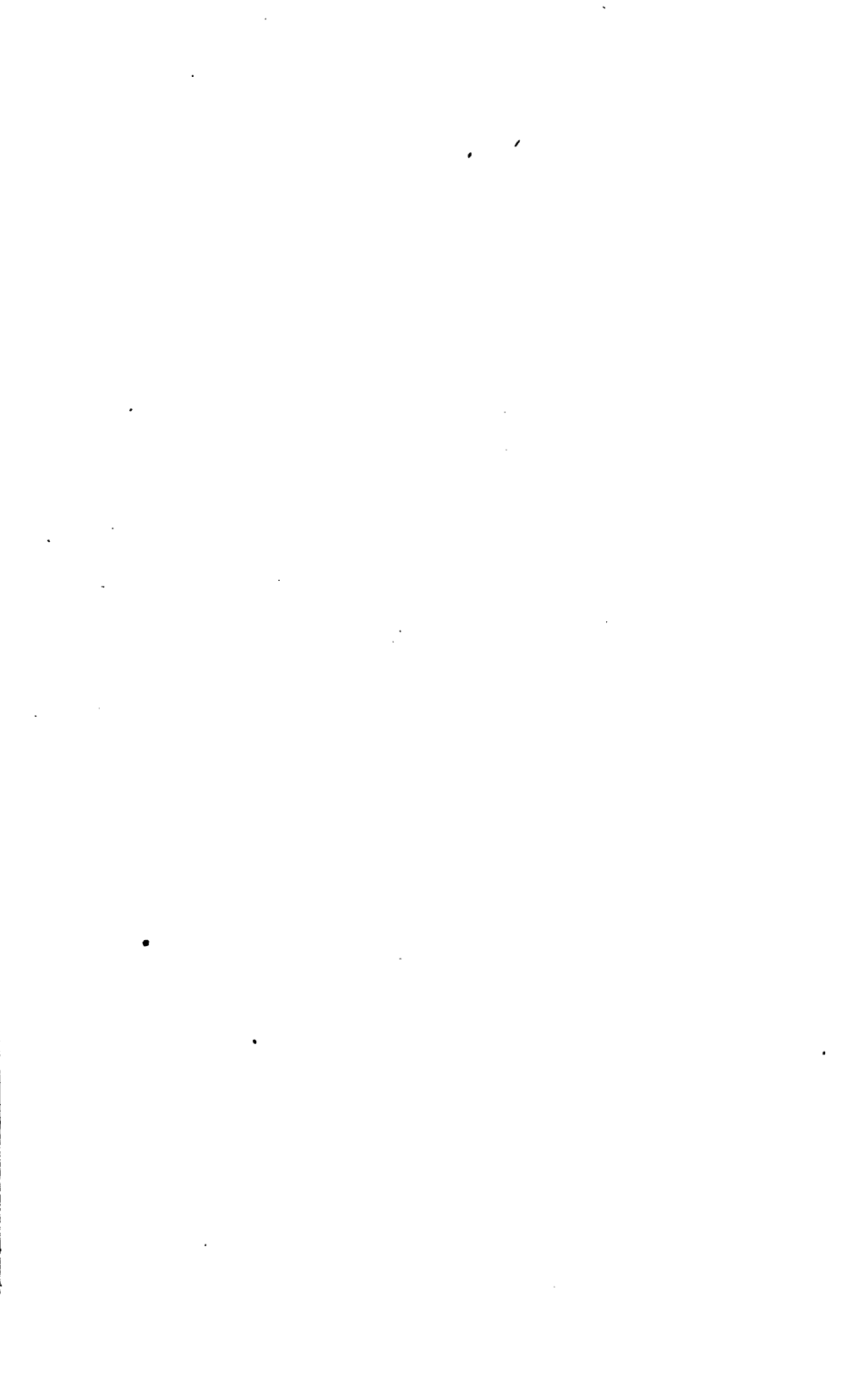


FIG. 317.—HOUSE ON FARM NO. 1003, TOWN OF CORINTH, SARATOGA COUNTY



No. 1005.—Farm of 50 acres; located 6 miles from Corinth P. O., R. D. 2 and railway station on line of D. & H. R. R.; 1 mile from school;  $\frac{1}{2}$  mile from Methodist church. Highways, good. Surface of farm, gentle slope to south. Altitude, 1,170 feet. Soil, fertile, has always been dairy farm. Acres in meadow, 20; in natural pasture, 30; in timber, 25, pine. Acres tillable, 20. Fruit, 121 apple trees. Best adapted to fruit, corn, beans, etc. Fences in good condition. House, 8 rooms, fair condition. Outbuildings: horse barn, 26x28, good condition; cow barn, 30x36, good condition. Watered, house and barn, by well; fields, by spring and lake. This farm is on Efner's lake, 50 rods of shore, good camping sites. Occupied by tenant. Price, \$1,200. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Abram M. Hollister, owner, Corinth, N. Y. Owner will rent for cash.

No. 1006.—Farm of 50 acres; located 5 miles from Corinth P. O., R. D. 2, and railway station on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from Methodist church. Highways, good, hilly. Nearest village, Corinth, population 2,166, 5 miles distant, reached by highway. General surface, gently sloping to the south. Altitude, 1,200 feet. Quality of soil, fertile, glacial drift loam. Acres in meadow, 25; in natural pasture, 25; in timber, 25; a fine stand of pine 15 to 20 years. Acres tillable, 25. Fruit, 50 apple trees, 116 young apple and cherry trees, all in first class condition. Best adapted to hay, corn, potatoes and general farming. Fences, good, rail and board. House, 24x28 with wing. New roof on kitchen. Outbuildings: horse barn, 20x30, in good condition, cow barn, 30x40, old but usable, blacksmith shop, and granary in fair condition. House watered by well, barns by well and fields by springs. Efner Lake gives a shore line of 60 rods. A splendid place for a summer camp. Occupied by owner. Reason for selling, owner has other business. Price, \$1,500. Terms, part cash. Address A. M. Hollister, owner, Corinth, N. Y.

No. 1007.—Farm of 168 acres; located  $\frac{1}{4}$  mile from Corinth P. O., R. D. 2; 2 miles from railway station at Corinth on line of D. & H. R. R.; 1 mile from school; 1 mile from churches. Highways, good. Nearest village, Corinth, population 2,166. General surface, rolling. Altitude, 500 feet. Na-

ture of soil, sandy loam. Acres in meadow, 35; in natural pasture, 133; in timber, 20, maple, birch and 10 acres of pine. Acres tillable, 60. Fruit, a few apple and cherry trees. Best adapted to dairying or truck gardening. Fences, wire, in fair condition. House, new, 12 rooms, hard wood floors, slate roof, etc. Old house, 7 rooms, inhabited. Outbuildings: good barn for 6 cows and team, good ice house and hen house, a large barn and poultry house. House and barns watered by wells, fields by river and brook. Hudson river has a shore line of about a half mile. Occupied by tenant. Reason for selling, to close an estate. Price \$5,000. Terms, \$1,000 cash, balance on easy payments. This farm is located  $\frac{1}{4}$  mile from International Paper Companies' mills, giving unlimited employment to men. Excellent markets for dairy and farm products. Address Mrs. Julia McGuire, owner, Corinth, N. Y.

No. 1008.—Farm of 63 acres; located  $3\frac{1}{2}$  miles from Corinth P. O., R. D. 1; 1 mile from railway station at South Corinth on line of D. & H. R. R.;  $\frac{1}{8}$  mile from school;  $1\frac{1}{2}$  miles from churches, Methodist and Catholic. Highways, good. Nearest village, Corinth, population 2,166,  $3\frac{1}{2}$  miles distant, and reached by rail or highway. Surface of farm, rolling. Altitude, high. Soil, clay loam. Acres in meadow, 40; in natural pasture, 13; in timber, 10, consisting of hard wood, pine and hemlock; acres tillable, 35. Fruit, apples. Best adapted to corn, potatoes, oats and buckwheat. Fences, wire; 11 room house, in good condition; 1 barn; corn barn; hen house, in fair condition. House and barns are supplied with well water; fields by streams. Farm is situated within  $3\frac{1}{2}$  miles of Hudson river. Occupied by owner. Reason for selling, owner is a widow and unable to take charge of place. Price, \$2,500. Terms, cash. Address Mrs. T. J. Comstock, owner, Corinth, N. Y.

## TOWN OF GALWAY

Population 1,205

No. 1009.—Farm of 119 acres; located 7 miles from Ballston P. O., R. D. No. 1, and railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 4 miles from churches; 7 miles from butter factory;  $\frac{1}{2}$  mile from milk station. Nearest city, Schenectady population 72,826;

14 miles distant, reached by rail or state highway. General surface of farm, level. Altitude, 400 feet. Acres in meadow, 94; in pasture, 15; in timber, 10, hemlock and beech. Acres tillable, 94. Fruit, 9 cherry, 12 plum, 25 pear and about 75 apple trees. Best adapted to hay, grain and potatoes. Fences, stone wall and wire, good condition. House, 7 rooms on ground floor, 5 on second, good condition. Outbuildings: barn including cow stable 67x30, newly painted, lean-to 32x10; carriage house and horse stable 40x26, sheep pen, poultry house, all in good condition. House watered by well, barns by well, fields by brook. Occupied by tenant. Worked on shares by year. Reason for selling, owner a widow. Price, \$5,000. Terms, cash. Price includes owner's share of cows, hogs, hens and a two-year-old colt. Address Mrs. Mary M. Betts, 11 Heritage street, Ballston Spa, N. Y.

#### TOWN OF GREENFIELD

Population 1,552

No. 1010.—Farm of 110 acres; 2½ miles from South Corinth P. O., Porter Corners, R. D. 1; 3 miles from station, on line of D. H. R. R.; ¼ mile from school; 2½ miles from Protestant church; 3 miles to creamery. Roads in vicinity, fairly good; 2 miles to State road leading from Saratoga to Corinth. Nearest village, Corinth, population 2,166, 7 miles distant, reached by rail and highway. Occupied by owner. Surface, about ½ hilly, remainder level. Soil, gravelly loam. Acres in meadow, 35; natural pasture, 50; timber, 25, second growth hemlock, spruce and hard wood; acres tillable, 70. Fruit, about 50 apple trees, several trees of pears, plums and cherries, ½ acre in strawberries and ¼ acre in raspberries. Best adapted to corn, potatoes, oats, buckwheat and fruits. Fences, stone, board, rail and wire, in good condition. House, 10 rooms, in first-class condition. Barns, 3 large barns, in first-class condition. Watered, house and barns, by living springs piped to buildings; fields, by springs and streams. This farm lies in the foothills of the Adirondack Mountains, Mooleville lake, about 2 miles distant. It is a very pleasant place, suitable for stock raising, especially sheep. A fine market for everything at Saratoga Springs. Reason for selling,

death of owner's husband. Price, \$3,000. Terms, \$1,500 cash, mortgage to secure balance. Address Mrs. Frances A. Dickens, owner, Porter Corners, N. Y. R. D. 1. Owner will rent.

No. 1011.—Farm of 120 acres; located 7 miles from Saratoga, 2½ miles from railway station at Kings on line of Delaware & Hudson R. R.; ½ mile from school; 1¼ miles from churches, Methodist and Episcopal, 2 miles from cheese factory and condensing plant. Highways, good. Nearest large village, Saratoga, population, 12,693, 8 miles distant, reached by rail or highway. Surface of farm, rolling and level. Soil, dark clay, sandy loam. Acres in meadow, 35; in natural pasture, 80; in timber, 5, consisting of beech, birch and maple; acres tillable, 90; 3 acres sugar maple. Best adapted to onions, carrots, cabbage, berries, potatoes, corn, oats and buckwheat. Fences, wire and board; 2 story house; 2 barns; carriage house. Watered, house by well and cistern; barns by well; fields by streams. Farm is situated in the vicinity of Adirondack Mountains, Kayaderoseras Creek and Fly Lake. Occupied by owner. Reason for selling, old age. Price, \$2,400. Terms, \$2,000 cash, balance on mortgage. This is considered a fine stock farm, with mill on farm. Could be used for summer boarders. Address Daniel Shaw, owner, Greenfield Center, N. Y.

No. 1012.—Farm of 50 acres; 1½ miles from Middle Grove P. O., R. D. 2, Greenfield Center; 1½ miles from railway station at Middle Grove on line of Eastern New York R. R.; ½ mile from school and churches; 4 miles from butter factory; 1½ miles from milk station. Highways, good. Nearest large village, Saratoga, population 12,693, 8 miles distant, reached by highway, rail and trolley. Surface, level, some rolling. Soil, clay loam. Acres in meadow, 25; in timber, 2, second growth pine, chestnut; acres tillable, 47. Fruit, 500 apple 10 year and 6 cherry trees; also currants, grapes, raspberries and strawberries. Best adapted to corn, oats, rye, buckwheat and potatoes. Fences, woven wire, barbed wire, board and some stone wall. House, 12 rooms, good condition. Large barn with basement, in good condition; carriage house, pig house, 2 hen houses. Watered by well and spring, running water in stable and barn yard. Occupied by owner. Good location. Present owner has summer boarders.

Reason for selling, old age of owner. Price, \$2,500. Terms, cash, or a reasonable amount down. The owner has 70 acres adjoining this farm, mostly clay, well watered. House, barn and corn crib. Fruit, apples and grapes. Five acres young timber, mostly pine. Buildings in rather poor condition. Price, \$1,500, or will sell the farm above advertised together with this farm for \$3,500. Address Mrs J. H. Stedman, owner, Greenfield Center, N. Y., R. D. 1. Owner will rent with option to buy.

No. 1013.— Farm of 100 acres;  $1\frac{1}{2}$  miles from Middle Grove P. O., R. D. 2;  $1\frac{1}{2}$  miles from railway station on line of E. N. Y. R. R.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches and milk station;  $3\frac{1}{2}$  miles from butter factory. Highways, somewhat hilly but good. Nearest large village, Saratoga Springs, population 12,193,  $8\frac{1}{2}$  miles distant, reached by rail and highway. Surface, rolling and level. Acres in meadow, 30; in natural pasture, 45; in timber, 25, pine, hemlock, chestnut and hard wood. Acres tillable, 75. Fruit, 20 apple, 4 plum and 4 cherry trees. Best adapted to corn, oats, buckwheat and vegetables. Fences, stone, rail, fair condition. House, 2 stories, 22x32; 2 wings, 13x18. Outbuildings: barn, 26x47; cow stable, 3x24; wagon house; granary, 18x40; wagon house, 18x24; tool house, 13x20; poultry house and hog house. Watered by well, spring and creek; water also pumped in house and barn by hydraulic ram. Lake Desolation, a summer resort, is about 2 miles from farm. Reason for selling, poor health of owner. Price, \$3,000. Address Samuel Kilmer, owner, Greenfield Center, N. Y., R. D. 2.

No. 1014.— Farm of 100 acres, located  $1\frac{1}{2}$  miles from railway station at Kings on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches and  $1\frac{1}{2}$  miles from butter factory. Highways, good country road. Nearest village, Corinth, population 2,166, distance 6 miles. Surface, gentle slope. Altitude, 300 feet. Nature of soil, sand and gravel loam. Acres in meadow, 25; in natural pasture, 25; in timber, 60, hemlock, pine, chestnut, and hardwood. Fruit, 100 young trees, plums, pears and apples. Best adapted to potatoes, corn, fruit, truck gardening and general farming. Fences, partly new, wire, remainder in fair condition. House, 26x36 and wing. Outbuildings: cow

barn, 30x40, carriage house and shed, 26x52. House watered by well, barns by spring, fields by spring and brook. Adirondack Mountains in the distance. Occupied by tenant. Reason for selling, owner has other business. Price, \$2,000. Terms, cash \$1,000, balance easy payment. Address Isaac Densmore, owner, Corinth, N. Y. Will rent at \$200 per year.

No. 1015.— Farm of 123 acres; located  $1\frac{1}{2}$  miles from Saratoga P. O., R. D.;  $\frac{1}{2}$  mile from railway station at Saratoga Springs;  $1\frac{1}{2}$  miles from school and churches;  $1\frac{1}{2}$  miles from milk station. Nature of soil, sand, gravel and loam. Acres in meadow, 50; in pasture, 30; in timber, 25, pine, oak and hickory. Acres tillable, 50. Fruit, apples 35 trees, pears 5, plums 6. Best adapted to truck gardening. Fences, wire, good. House, 30x60, 15 rooms, good condition. Outbuildings: barn 30x52, shed attached, hen house 30x20, ice house, shop over it, 15x25, open shed for wagons 40 feet. House watered by reservoir, barns by driven well, fields by springs. Occupied by owner. Reason for selling, advanced age. Small pond on farm. Price, \$6,000. Terms, cash. Address Charles P. Cronkhite, owner, Saratoga Springs, N. Y.

No. 1016.— Farm of 92 acres, located  $\frac{1}{4}$  mile from Greenfield P. O. and railway station on line of D. & H. R. R.; 2 miles from school;  $\frac{3}{4}$  mile from churches  $\frac{1}{2}$  mile from butter factory, and  $\frac{1}{4}$  mile from condensing plant. Highways, good. General surface, level. Nature of soil, dark loam. Acres that can be used as meadow, 60; in natural pasture, 22, in timber, 10, beech, birch, maple, pine and hemlock. Acres tillable, 82. Fruit, apples and currants. Best adapted to berries, onions, corn, oats, buckwheat and potatoes. Fences, all wire, in good condition. Twelve-room house in fair condition, painted white. Barn, 30x40, cow stables and shed. House watered by well, barn by stream, fields by stream. Occupied by owner. Reason for selling, ill health. Price, \$2,600. Terms, \$2,400 cash, balance on mortgage. This farm has timber enough to more than half pay for the farm. Address Daniel Shaw, owner, Porters Corners, N. Y.

No. 1017.— Farm of 80 acres; located  $\frac{1}{4}$  mile from Porter Corners P. O., R. D. 1;  $1\frac{1}{2}$  miles from railway station at Kings, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school and Methodist church; 1 mile from butter factory. Highways

in fair condition. Nearest large village, Saratoga, 9 miles distant, reached by rail and highway. Surface of farm rolling. High altitude. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 30; in timber, 20, second growth. Acres tillable, 30. Fruit, apples. Best adapted to potatoes, buckwheat and oats. Fences, wood and wire. House, 25x40, 9 rooms. Outbuildings: barn, 30x40, stable for 6 cows, 2 horses, also good hen house. Watered by well and stream. Occupied by owner. Reason for selling, ill health. Price, \$1,200. Terms, \$250 cash. Address Charles Hildebrandt, Schenectady, R. D. 7.

## TOWN OF MALTA

Population 1,285

No. 1018.—Farm of 132 acres, located 4 miles from Ballston Spa. P. O., R. D. No. 3 and station, on line of Hudson Valley Electric railway;  $\frac{1}{4}$  mile from school; 1 mile from Presbyterian church; 4 miles from cheese factory, and  $\frac{1}{2}$  mile from condensing plant. Nature of highways, level hard road. General surface, slightly rolling. Nature of soil, black and gravel loam. Acres that can be used as meadow, 120; in natural pasture, 12. Acres tillable, 120. Fruit, 100 apple trees, different varieties. Best adapted to grain and hay. Fences, American wire, in good condition. House, 12 rooms; tenant house, 10 rooms. Outbuildings: two sets of buildings, in good condition, cow barn for 20 cows. House watered by well and fields by spring. Occupied by owner. Reason for selling, wishes to retire. Price, \$11,000. Terms, cash. Address Schuyler Davey, owner, R. D. No. 3, Ballston Spa, N. Y.

No. 1019.—Farm of 9 acres, located  $1\frac{1}{2}$  miles from Ballston Spa. P. O., R. D., No. 3 and railway station on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory; 3 miles from cheese factory. Highways, good. Nearest large village, Ballston Spa, population 4,138, reached by highway. Surface, nearly level. Acres in timber, 1, second growth, swamp. Acres tillable, 8. Fruit, 5 apple trees and 1 pear tree, some currants. Best adapted to hay, corn and potatoes. Fences, wire, fair condition. No house. Outbuilding; barn, wagon house, corn house, hen house, hog house, fair condition. Saratoga Lake 2 miles distant. Reason for selling, owner a widow. Price, \$400. Terms, cash preferred, or

part on contract sale. Address Mrs. Ella Morrissey, owner, 333 Malta avenue. Ballston Spa, N. Y.

No. 1020.—Farm of 84 acres, located 4 miles from Ballston Spa. P. O., R. D. No. 3 and railway station on line of D. & H. R. R. and trolley; 1 mile from school; 4 miles from churches; 4 miles from butter factory. Highways, good. Nearest village, Saratoga Springs, population, 12,693, 4 miles distant, reached by rail or highway. General surface, sand and loam. Acres that can be used as meadow, 40; in natural pasture, 10; in timber, 8. Acres tillable, 65. Fruit, 100 apple trees. Best adapted to garden trucking. Fences, wire and rail. House, 11 rooms, good condition. Barn, 40x30. House watered by well and cistern, barns by well, fields by spring and brook. Occupied by tenant. Reason for selling, too much real estate. Price, \$3,500. Terms, cash. Address Joseph Rowley, owner, Ballston Spa, N. Y., or W. D. Rowley, broker, Ballston Spa, N. Y. Owner will rent.

No. 1021.—Farm of 72 acres, located 3 miles from Ballston P. O., R. D. No. 3 and railway station at Saratoga Springs, on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from church; 3 miles from butter factory. Highways, good. Nearest village, Saratoga Springs, population 12,693,  $3\frac{1}{2}$  miles distant, reached by highway. General surface, rolling. Acres that can be used as meadow, 60; in natural pasture, 8; in timber, 4, pine. Acres tillable, 60. Fruit, 50 apple trees. Fences, wire and rail, fair condition. House, 7 rooms, good condition. Barn, 60x30, and shed. House watered by well, barns by well, and fields by brooks. Occupied by tenant. Reason for selling, has another farm. Price, \$3,000. Terms, cash. Address Joseph Rowley, owner, Ballston Spa, N. Y., or W. D. Rowley, broker, R. D. No. 3, Ballston Spa, N. Y. Owner will rent.

No. 1022.—Farm of 54 acres; located 4 miles from Ballston Spa P. O., R. D. No. 3 and railway station, on line of D. & H. R. R.;  $1/10$  mile from school;  $\frac{1}{4}$  mile from churches; 4 miles from butter factory and milk station. Nearest large village, Saratoga Springs, population 12,693, 5 miles distant, reached by State road. General surface, rolling. Altitude, 300 feet. Nature of soil, part sand, part gravelly loam. Acres in meadow, 10; in pasture, 7; in timber, 3. Acres tillable, 34. Fruit, 25 apple trees, va-

tiety. Best adapted to gardening and grain. Fences, wire, good condition. House,  $1\frac{1}{2}$  stories, 13 rooms, 30x50. Outbuildings: barn, 30x40 with 13 ft. posts; carriage house, 20x40, all in good condition. Saratoga Lake,  $\frac{3}{4}$  mile distant. Occupied by owner. Reason for selling, to settle an estate. Price, \$3,000. Terms, cash. Address Charles N. Riley, owner, R. D. No. 3, Ballston Spa, N. Y.

No. 1023.—Farm of 112 acres, located 3 miles from Ballston Spa. P. O., R. D. No. 3 and railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{8}$  mile from Methodist church and 3 miles from butter factory. Highways, good. Nearest village, Saratoga Springs, population 12,693, 4 miles distant, reached by rail or highway. General surface, rolling. Acres that can be used as meadow, 40; in natural pasture, 30; in timber, 7, hemlock and hard wood. Acres tillable, 45. Fruit, apples, plums and cherries. Best adapted to all kinds of farm products and garden truck. Fences, wire, in good condition. House, 12 rooms, slate roof, newly painted. Outbuildings: barn, 12x55, wagon house, poultry house, ice house, hog house and corn house, good condition. House watered by well and cistern, barns by running water, and fields by creek. Saratoga Lake, 1 mile distant. Occupied by owner. Reason for selling, to settle an estate. Price, \$5,000. Terms, cash. Address Mrs. Ollie A. Compkins, owner, R. D. No. 3, Ballston Spa, N. Y.

No. 1024.—Farm of 153 acres; located 4 miles from Ballston P. O., R. D. No. 3 and railway station on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches; 4 miles from butter factory. Nearest large village, Saratoga, population 12,693, reached by State highway, 4 miles distant. General surface, rolling. Nature of soil, gravel loam. Acres in meadow, 75; in pasture, 50; in timber, 28, oak, maple and chestnut. Acres tillable, 75. Fruit, 50 apple trees. Best adapted to hay. Fences, wire and rail. House, 14 rooms. New barn, 40x64. House watered by well and cistern; barn, by well; fields, by creek. Near Saratoga Lake. Occupied by owner. Reason for selling, has too much real estate. Price, \$9,000. Terms, cash. Address W. D. Rowley, owner, R. D. 3, Ballston Spa, N. Y.

## TOWN OF MILTON

Population 5,724

No. 1025.—Farm of 200 acres; located 1 mile from Middle Grove P. O. and trolley station on line of Eastern New York Railway;  $\frac{3}{4}$  mile from school; 1 mile from churches. Nearest large village, Saratoga Springs, population 12,693, 6 miles distant, reached by rail or highway. General surface, hilly. Nature of soil, limestone loam. Acres in meadow, 50; in pasture, 30; in timber, 20, mostly chestnut. Acres tillable, 100. Fruit, apples 100 trees, plums 10, cherries 5, other small fruit. Best adapted to corn, oats and potatoes. Fences, stone and wire, poor condition. House, 25x32, two wings, fair condition. Outbuildings: double barn, 100x36, in poor repair, horse, cattle and carriage barn, 60x28, good condition. Woodshed, ice house, etc., fair condition. House watered by well, barns by springs, fields by streams. Occupied by owners. Reason for selling, to settle estate. Price, \$3,500. Terms, cash. Address D. M. Murray or Esther A. Murray, owners, Middle Grove, N. Y.

No. 1026.—Farm of 10 acres; located  $1\frac{1}{2}$  miles from Ballston Spa P. O., R. D. No. 1 and railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory and milk station. General surface, level. Nature of soil, dark sandy loam. Acres in meadow, 20; in timber, 35, birch, pine and chestnut. Acres tillable, 40. Fruit, 20 apple trees. Best adapted to general and truck farming. Fences, wire. House, frame, 9 rooms, good condition. Outbuildings: barn 30x42, new; chicken house; wagon house, poor condition. House watered by well, barn by well and brook, fields by brook. Reason for selling, former owner died; heir too old to run farm. Price, \$2,100. Terms, cash. Address John Reick, owner, King House, Ballston Spa, N. Y.

No. 1027.—Farm of  $8\frac{1}{2}$  acres; located 2 miles from Saratoga Springs P. O., R. D. No. 2 and railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches. Nature of highways, State road. Population of Saratoga 12,693, reached by trolley or State road. General surface of farm, level. Altitude, 360 feet. Nature of soil, sand loam. Acres in meadow,  $8\frac{1}{2}$ . Fruit, 12 apple, 6 pears, 3 peach and 8 plum trees.

and small fruit. Best adapted to fruit. Fences, wire, good condition. House, new, 14 rooms, all modern conveniences. Barn, ice house and poultry house. House, barn and fields watered by artesian well. Occupied by tenant. Reason for selling, ill health. Price \$5,500. Terms, cash. Address Mrs. Allie Monroe or Miss Amy Colvin, owners, Saratoga, N. Y., R. D. No. 2.

**TOWN OF MOREAU**  
Population 3,340

No. 1028.—Farm of 50 acres; located  $\frac{3}{4}$  mile from South Glens Falls P. O.,  $1\frac{1}{2}$  miles from railway station at Glens Falls on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches; 2 miles from butter factory and milk station. Highways, good. Nearest city, Glens Falls, population 15,243, 1 mile distant, reached by highway and trolley. General surface, nearly level. Nature of soil, sandy loam. Acres in natural pasture, 40. Acres tillable, 40. Fruit, 25 apple trees. Best adapted to all kinds of crops. House, 12 rooms, brick, in good condition. Large barn, not very good. Watered, house, by city water; fields, by springs. Occupied by tenant. Reason for selling, wishes to retire. Price, upon application. House stands on high ground overlooking Hudson river. Address Miss Harriet A. Bentley, owner, 11 Pine street, Glens Falls, N. Y.

No. 1029.—Farm of 144 acres, located 5 miles from Glens Falls P. O.; 1 mile from railway station on Hudson Valley trolley; also on line of D. & H. R. R.; 1 mile from milk station. Highways, about 1 mile to State road. Nearest city, Glens Falls, population 15,243, 5 miles distant, reached by rail or highway. General surface, part river flats and part on two higher terraces. Nature of soil, loam. Some timber. Acres tillable, 70. Fruit, a few apple trees. Best adapted to general crops or gardening, lighter land to rye and the flats to truck farming. House burned foundation remains. Good sized barn and shed in fair condition. Watered by well near buildings, barns watered by springs and creeks. Hudson river borders farm. 10 or 12 miles from Lake George, near Adirondack mountains. Reason for selling, owner a widow. Price, \$1,000. Terms, \$400 or \$500 down, balance, easy payments. Address Mrs. Robbiliard, owner, 200 South Second street, Lehigh, Pa., or W. B. Vail, agent, 469 State street, Schenectady, N. Y.

No. 1030.—Farm of 176 acres, located  $\frac{1}{2}$  mile from South Glens Falls P. O.,  $\frac{1}{2}$  mile from railway station on line of H. V. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches; milk collected at the door. Highways, State road. Nearest city, Glens Falls, population 15,243,  $\frac{1}{2}$  mile distant, reached by electric railway and State road. General surface, level and rolling. Altitude, 450 feet. Nature of soil, sandy and loam. Acres that can be used as meadow, 30; in natural pasture, 120; in timber, 20, chestnut. Acres tillable, 120. Best adapted to gardening. No buildings. Fields watered by brook. Reason for selling, ill health. Price, \$7,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. The water which supplies South Glens Falls runs through this farm. Address Mrs. Frances A. Foster, owner, Glens Falls, N. Y., or John J. Wetsel, broker, 105 Circular street, Saratoga Springs, N. Y.

**TOWN OF SARATOGA**  
Population 3,942

No. 1031.—Farm of 121 acres; 3 miles from Wayville P. O., R. D. 1;  $\frac{3}{4}$  mile from railway station at Cedar Bluff on line of B. & M. R. R.; 1 mile from school; 2 miles from church; 6 miles from butter factory;  $\frac{3}{4}$  mile from condensing plant. Highways, level and smooth. Nearest city, Saratoga Springs, population 12,693,  $5\frac{1}{4}$  miles distant, reached by rail and highway. Surface, level, no stone. Soil, good, heavy sand loam. Acres in meadow, 60; in natural pasture, 45; in timber, 15, oak, chestnut and pine; acres tillable, 100. Fruit, pears, plums, cherries, peaches and 5 acres of choice apples. Best adapted to potatoes, corn, oats, rye, wheat and barley. Fences, American wire and rail, good condition. House, 2 stories, 14 rooms, in good condition. Large hay barn, horse barn, wagon house, pig house and corn house, all in good condition. Watered by well and spring.  $\frac{3}{4}$  mile from Saratoga Lake. Occupied by owner. Reason for selling, poor health of owner. Price, \$6,000. Terms, \$4,000 down, balance on mortgage. Owner will sell stock and tools if any one desires, at a reasonable price. Address David P. Robbins, owner, Wayville, N. Y., R. D. 1.

No. 1032.—Farm of 167 acres; located  $\frac{1}{2}$  mile from railway station at Burgoyne, on line of B. & M. Ry.;  $\frac{1}{4}$  mile from school; 6 miles from churches of all denominations and milk station;  $2\frac{1}{4}$

miles from butter factory; 7 miles from milk condensing plant. Highways, State road. R. F. D. to farm. Nearest large village, Saratoga Springs, population 12,693, 6 miles distant, reached by rail and highway. Surface of farm, rolling. Soil, clay, sand and gravel loam. Acres in meadow, 40; in natural pasture, 22; in timber, 9, pine and chestnut. Acres tillable, 100. Fruit, 45 apple, 6 cherry and 10 plum trees, also small strawberry patch. Best adapted to dairying or general farming. Fences, barbed wire and rail, fair condition. House, 2½ stories, 2 family, 18 rooms, good condition. Outbuildings: 2 barns, one 30x52, and one 20x40, shed, carriage house, hen house, ice house and smoke house, all in good condition except one barn and shed. Watered, house, by spring; barn, by drilled well; fields, by creek. Occupied by owner and tenant. Reason for selling, ill health of owner. Price, \$10,000. Terms, ½ cash, balance on bond and mortgage. Fifteen acres of moulding sand on farm. Address Chauncey A. Wooley, owner, Saratoga Springs, N. Y., R. D. 1. Owner will rent.

No. 1033.—Farm of 60 acres; located 4½ miles from Saratoga Springs P. O., R. D. No. 1; ¼ mile from Cedar Bluff railway station on line of Boston & Maine R. R.; 2 miles from school; 4½ miles from churches; ¼ mile from milk station. Nearest large village, Saratoga, population 12,693, reached by rail or good gravel highway. General surface, gently sloping. Altitude, 250 feet. Nature of soil, clay and gravelly loam. Acres in meadow, 48; in timber, 9, ash, maple and elm. Acres tillable, 48. Fruit, 30 apple trees, varieties, also a number of young trees. Best adapted to grain and hay. Fences, rail, barbed and cable wire, need some repairs. House, 12 rooms, in good condition. Outbuildings: carriage and horse barn, 40x26; hog house, 20x30, 2 stories; poultry house, 12x24; carriage house needs repair. House and barns watered by piped spring water; fields, by brooks. Saratoga Lake adjoins farm. Occupied by owner. Reason for selling, other business. Price and terms upon application. Address Wm. W. Muneo, owner, R. D. 1, Saratoga Springs, N. Y.

No. 1034.—Farm of 87 acres, located 4 miles from Wayville P. O., R. D. 1; 1 mile from railway station at Cedar Bluffs on line of Boston & Maine R. R.;

1 mile from school; 3 miles from churches; 6 miles to butter factory; 1 mile from milk station. Nature of highways, good. Nearest large village, Saratoga Springs, population 12,693, 6 miles distant, reached by highway. General surface, rolling. Altitude, 350 feet. Nature of soil, slate loam. Acres in meadow, 25; in pasture, 10. Acres tillable, 75. Fruit, 175 apple, 65 pear and 25 plum trees. Best adapted to potatoes and fruit. Fences, woven wire, good. House, 11 rooms, 25x31; wing, 15x18, good condition. Outbuildings: barn, 36x58, horse barns, 30x28 and 30x20, woodshed, 21x30, poultry house, 10x30. House and barns watered by wells; fields, by springs and brook. Saratoga Lake, 1 mile distant. Occupied by owner. Reason for selling, other business interests. Price, \$6,000. Terms, cash. Address, Fred Peck, owner, Wayville, N. Y., R. D. 1.

No. 1035.—Farm of 114 acres; 7 miles from Saratoga Springs P. O., R. D. 1; 2 miles from railway station at Cedar Bluff on line of B. & M. R. R.; ½ mile from school; 2 miles from churches and milk station; 4 miles from butter factory. Highways, good. Surface of farm, slopes a little south, well drained. Soil, clay and sand loam. Acres in meadow, 60; in timber, 13, variety; acres tillable, 100. Fruit, 70 apple, 11 pear, 16 cherry trees and some grapes. Best adapted to hay, grain, fruit, etc. Fences, wire, board and rail, good condition. House, 2 stories, brick, 8 large rooms and hall, 4 small rooms; telephone in house. Outbuildings: 2 large basement barns, wagon house, hen house, new iron roof on one barn last year, others painted, fair condition. Watered by well, spring and brook. Saratoga Lake, 2 miles from farm; Hudson river, 4 miles, and Adirondack mountains, 12 miles. Occupied by tenant. Reason for selling, to close an estate. Price, \$6,500. Terms, \$3,500 cash, remainder on first mortgage, if desired. Address, E. J. Peck, owner, Saratoga Springs, N. Y., or O. V. Howland, agent, Saratoga Springs, N. Y.

## TOWN OF SARATOGA SPRINGS

Population 13,710

No. 1036.—Farm of 40 acres; ½ mile from Saratoga Springs; ¾ mile from railway station at Saratoga Springs on line of D. & H. and B. & M. R. R.,

$\frac{3}{4}$  mile from school and churches of all denominations. Highways, State road. Surface of farm, level. Soil, sandy loam. Acres in meadow, 2; acres tillable, 38. Best adapted to truck gardening. No fences. House, 10 rooms, steam heated, baths and toilets, excellent condition. Outbuildings: large bar, carriage house, green house plant, etc. Watered by city water. This place has been conducted as a hothouse and gardening plant for many years. There are 8 hothouses, averaging 100 feet in length, with a width of about 18 feet, double side benches with large center porch. Houses are heated with hot water boilers, latest designs, new ones having been installed during the last 2 years. Everything modern and in first-class condition. In connection with these hothouses, are 2 large, well constructed boiler houses, with complete outfit and general storage space. Over one of the boiler houses is a 3-room apartment finished off which may be used for help. These houses have been used for growing rhubarb, radishes and lettuce for early market and later in season for cucumbers. About 12 good-sized hot beds, with sash to cover. About 5 acres in asparagus beds; 20 acres in rhubarb used for forcing in hothouses in winter. This business has been running for about 20 years and a market has been established in New York, Albany, Troy, Schenectady and locally which uses all of the products at a good price. Occupied by owner. Reason for selling, death of former owner. Price, \$12,000. Terms,  $\frac{1}{2}$  cash, first mortgage on balance. Address Etta C. Wells, owner, 184 Church street, Saratoga Springs, N. Y. Owner will rent with option to buy.

No. 1037.—Farm of 18 acres; 2 miles from Saratoga Springs P. O., R. D. 7; 2 miles from railroad station at Saratoga Springs on line of the B. & M. R. R.; 1 mile from school; 2 miles from churches; 2 miles from cheese factory; 4 miles from condensing plant. Good State roads. Nearest large village, Saratoga Springs, population 12,693, distant 2 miles by highway. Surface, part hilly and part level. Soil on level portion, loam. 8 acres of meadow; 2 acres of natural pasture; 5 acres of timber, young birches and others; 11 acres are tillable. 2 cherry trees, 1 apple tree and 30 currant bushes. Can raise celery, corn, potatoes or any kind of crop. Fences, wire, not very good. House,

8 rooms, good condition, with woodshed Barn, 30x20; wagon shed, 10x20; hog house; underground cow stable. Watered by spring, fields have running water. Saratoga Lake is 2 miles from farm. Reason for selling, owner has village property. Price, \$1,500. Terms, \$600 down, balance to suit purchaser. Address Mrs. John H. Driscoll, owner, 2 Pleasant street, Saratoga Springs, N. Y. Owner will rent.

No. 1038.—Farm of 35 acres, located  $1\frac{1}{2}$  miles from Saratoga Springs P. O. and railway station, on line of D. & H. R. R.;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory and milk station. Highways State road. General surface, level. Acres that can be used as meadow, 30. Very little timber. Acres tillable, 30. Fruit, 20 trees. Best adapted to potatoes and corn. Fences, not very good. Brick house, 25x35, in good condition. Basement barn with slate roof, good condition. House watered by spring, barn by spring. Saratoga Lake, 2 miles distant. Occupied by tenant. Reason for selling, old age. Price, \$5,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address John C. Harris, owner, Saratoga Springs, N. Y. Owner will rent.

#### TOWN OF STILLWATER

Population 5,955

No. 1039.—Farm of 30 acres; located 2 miles from Mechanicville P. O., R. D. No. 3 and railway station on lines of Boston & Albany and D. & H. R. R.; 2 miles from school and churches; 2 miles from butter factory;  $\frac{1}{4}$  mile from milk station. Population of Mechanicville, 6,634, reached by highway, or trolley. General surface, rolling and level. Nature of soil, sandy loam. Acres in meadow, 18; in pasture, 8; acres tillable, 25. Fruit, 40 apple and 20 cherry trees. Best adapted to general farming. Fences, board and wire, good condition. Large house, good condition, can be used for two families. Large barn, stables in basement. House and barn watered by well; fields by creek. Occupied by owner. Reason for selling, advanced age of owner. Price, \$4,000. Terms, \$2,500 cash. Mortgage now on place for \$1,500, which can remain at 5%. Address Wm. H. or Wm. R. Hutchins, owners, Mechanicville, N. Y., R. D. No. 3.

## TOWN OF WILTON

Population 908

No. 1040.—Farm of 100 acres, located 6 miles from Saratoga Springs P. O., R. D. 2;  $4\frac{1}{2}$  miles from railway station at Gansevoort on line of Delaware & Hudson R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 5 miles from butter factory and 5 miles from milk station. Highways, fair. Nearest village, Saratoga Springs, population 12,693, 6 miles distant, reached by State road and rail. Surface of farm, slightly rolling. Soil, sandy. Acres in meadow, 6; in timber, 10, consisting of yellow pine, birch and oak; acres tillable, 80. Fruit, apples and strawberries. Best adapted to small fruit, corn, rye, buckwheat, etc. Fences, mostly wire, in good condition;  $1\frac{1}{2}$  story frame dwelling, 13 rooms, with shed and work shop attached. Barn, silo, horse stable, wagon house, granary, wagon shed, cow shed, hen house, tool house, hog house, all in good condition. House and barn are supplied with well water; fields, by stream. This farm is situated within 5 miles of Mt. McGregor,  $6\frac{1}{2}$  miles from Saratoga Lake,  $4\frac{1}{2}$  miles from Fish Creek, and  $5\frac{1}{2}$  miles from Loughberry Lake. Reason for selling, owner has other business. Price, \$2,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Owner is willing to rent farm for \$75 yearly. Premises has telephone connection, trout stream, etc. Address O. S. Stanton, owner, Ballston Lake, R. D. 1, N. Y.

## MISCELLANEOUS

No. 1041.—Farm of 177 acres, 11 miles from Amsterdam;  $3\frac{1}{2}$  miles from West Galway; practically on the line of the proposed trolley line connecting Hagaman with Rock City Falls, which will

surely come through. 25 acres of tillable land, which would be enough to take care of the place; 81 acres in woods, 5 acres of which is a fine pine grove. The lake covers 65 acres, fed by trout streams, and there is fine fishing. The soil is a sandy loam, making it a most desirable spot for a sanitarium or club house. There is a new house of 17 rooms and the attic could be finished off for 2 or 3 more rooms; porch, 10x80. A 2-story camp in the pine grove; 2 cottages in pine grove, 12x20 each. Barn, 28x40; barn, 17x35; wagon house, 20x26; granary, 12x20; ice house, 12x12; hog house, 12x14; another building, 22x50, that could be made into a camp. There are 6 boats included with the property. Price, \$5,100. Address A. A. Butterfield, owner, Hagaman, N. Y., R. D. 2.

No. 1042.—Farm of 128 acres, located  $\frac{1}{2}$  mile from Wayville P. O., R. D. No. 1;  $\frac{1}{2}$  mile from railway station at Cedar Bluff on line of Boston & Maine R. R. Highways, good dirt road. Nearest large village, Saratoga Springs, population 12,693, 5 miles distant, reached by highway and trolley. General surface, partly rolling. Nature of soil, sand and clay loam. Acres in meadow, 10; in pasture, 25; in timber, 25, hard wood. Acres tillable, 68. Fruit, 200 trees, varieties. Best adapted to hay, grain and vegetables. Fences, rail and wire, fair condition. House, 14 rooms, fair condition. Barn, 30x42, 1 smaller barn. House watered by spring, barns by running water, fields by stream. Saratoga Lake, in view of farm. Occupied by owner. Reason for selling, old age. Price, \$4,500. Terms, cash. Address, Mrs. Julia Wright, owner, Wayville, N. Y., or William J. Battin, agent, Watervliet, N. Y.

## SCHENECTADY COUNTY

Area, 200 square miles. Population, 88,235. Annual precipitation, 35.41 inches. Annual mean temperature, 46.8°. Number of farms, 1,027. County seat, Schenectady.

This county is located in the eastern part of the state intersected by the Mohawk River.

The surface in the western part of the county is uneven and hilly, the hills being small and abrupt with many ravines. This section is suitable for pasturage chiefly. In the southern and western parts and along the Mohawk Valley the soil is black slate and clay loam which is fertile and very productive. The value of all farm property is \$7,217,178, which is an increase of 29.1 per cent over the census of 1900. The principal crops reported were: corn, 109,694 bushels; oats, 247,945 bushels; buckwheat, 102,165 bushels; rye, 40,259 bushels; potatoes, 87,140 bushels; hay and forage, 33,346 tons. The average price of improved farm lands including buildings is \$55.48 per acre. The average value per acre of farm lands only is \$31.10;

an increase of nearly \$10 per acre since 1900. Domestic animals are found to be: dairy cows, 4,929; horses, 3,162; swine, 2,952; sheep, 3,501; poultry, 62,771. The number of farms reporting dairy cows are 864, producing 2,459,571 gallons of milk, which sold for \$233,271. There are no creameries or cheese factories in the county, as most of the milk is sold in Schenectady and the different villages. The county is crossed by the Erie canal (barge), and the New York Central, West Shore and Delaware and Hudson railroads, and by numerous trolley lines leading to Amsterdam, Albany, Troy, etc. Schenectady with a population of 72,826 is known largely as being the seat of Union University, founded in 1795. Here also is located the American Locomotive Works, the second largest plant of its kind in the country. The enormous plant of the General Electric Company employing some 17,000 workmen is also in that city. These two large industrial plants in common with others scattered throughout the state are largely responsible for the great numbers of farm boys that have left the farm to work in these industries. There are 51 schools in the county and it has only 28 miles of highway which is not improved. Its agricultural organizations consist of an agricultural club, 3 granges, and poultry, pigeon and pet stock organizations.

#### TOWN OF DUANESEBURG

Population 2,211

No 1043.—Farm of about 90 acres; at Brame's Corners; 5 miles from Delanson, on line of D. & H. R. R.; 4 miles from Esperance; 27 miles from Albany; 15 miles from Schenectady; 10 miles from Amsterdam;  $\frac{1}{2}$  mile from church, school and store; R. D. New York morning papers reach the farm at 1 o'clock in the afternoon of the day they are published. 10 acres of timber, balance in meadow and pasture land. Best adapted to corn, rye, oats, buckwheat, potatoes, vegetables and small fruit. Good apple orchard. Comfortable, old-fashioned farm house, in good condition, 2 stories, 7 rooms and large kitchen with sink and pump from never-failing well; stone cellar; woodshed extension. Spring near house and well in barnyard. Outbuildings: barn, 22x72; hen house and woodshed. Fences, stone and wire. Would make a good dairy or bee farm. Price, \$3,500. Terms to responsible party will be made very easy with but a small payment down as the owner is anxious to have the farm go into good hands. Address F. C. Sauter, owner, 391 Sixth street, Brooklyn, N. Y.

No. 1044.—Farm of 178 acres, located 1 mile from Delanson P. O., R. D. 2 and railway station on line of D. & H. railway;  $\frac{3}{4}$  mile from school; 1 mile from churches; 1 mile from milk station. Highways, good, part State road. Nearest city, Schenectady, population 72,826, 15 miles distant, reached by rail and highway. General surface, part level and part rolling. Altitude, 1,200 feet. Nature of soil, loam. Acres in meadow, 75; in natural pasture, 63; in timber,

40, hemlock, beech, birch and hickory. Acres tillable, 100. Fruit, 175 apple trees of various kinds, 20 pear, 7 plum, trees and grapes. Best adapted to buckwheat, oats, corn and hay. Fences, wire and stone wall. House, large, octagon shape, arranged for two families, in first-class condition. Outbuildings: large hay barn, cow stable, sheds, pig pen, wagon house, 45x25, first-class condition. wood house, sheep house, all in good condition. House watered by village water and spring, barn, same, fields by spring and well. Normanskill runs through farm, 10 miles from Thompson's and Warner Lakes. Occupied by owner. Reason for selling; to settle an estate. Price, \$6,000. Terms, cash or at least four-fifths cash and one-fifth mortgage. Address Mrs. Zerah Jenkins, owner, Delanson, N. Y.

No. 1045.—Farm of 200 acres, located 6 miles from Delanson P. O., R. D. No. 2 and railway station at Duaneburg on line of D. & H. R. R.; 1 mile from school and  $2\frac{1}{2}$  miles from churches. Highways, good dirt road. Nearest city, Amsterdam, population 31,267, 9 miles distant, reached by rail or highway. General surface, level. Altitude, 1,100 feet. Nature of soil, good, clay and black loam. Acres that can be used as meadow, 150; in natural pasture, 40; in timber, 25, mostly hard wood. Acres tillable, 150. Fruit, a few apples and other fruits. Best adapted to hay, oats, buckwheat, corn and potatoes. Fences, wire and stone, fair condition. House, 7 rooms,  $1\frac{1}{2}$  stories, painted and in good condition. Outbuildings: hay and grain barn, horse barn, 2 poultry houses (1 new, 14x26), hog house, corn house, all in fair condition. House watered by well; barns, by well and springs; fields,

by stream and springs. Occupied by owner. Reason for selling, old age. Price, \$3,500. Terms, \$1,500 cash, balance on mortgage. Address J. H. O'Brien, owner, R. D. 2, Delanson, N. Y., or Walter B. Vail, broker, 469 State street, Schenectady, N. Y.

No. 1046.— Farm of 109 acres, located  $1\frac{1}{2}$  miles from Duaneburg P. O. and railway station on line of D. & H. R. R.; 1 mile from school and churches; 1 mile from butter factory; 1 mile from milk station. Highway, State road. Nearest city, Schenectady, population 72,826, 11 miles distant, reached by rail or highway. Altitude, 900 feet. Nature of soil, clay, gravelly and black loam. Acres in timber, 30 to 35. Acres tillable, 80 to 75. Best adapted to hay, oats, corn, rye, buckwheat and dairying. House, 8 rooms, in good condition. Outbuildings: basement barn, 23x30x48, hay mound above, wagon house and stables on lower floor. House, watered by well, spring water can be obtained by piping;

fields watered by springs. Occupied by tenant. Reason for selling, owner has retired. Price, \$1,900. Terms, \$1,000 or less down, to reliable purchaser. Address Robert C. Cullings, owner, Pattersonville, N. Y., or Walter B. Vail, agent, 469 State street, Schenectady, N. Y.

## TOWN OF NISKAYUNA

Population 1,907

No. 1047.— Farm of 15 acres; located 4 miles from Schenectady, R. D. No. 1, and railway station on line of N. Y. C. R. R.; 2 miles from school;  $2\frac{1}{2}$  miles from churches. Population of Schenectady 72,826, reached by trolley or highway. General surface, level. Acres in meadow, 15; acres tillable, 15. Fruit, apples. House and barn, small. Watered by well. Occupied by owner. Reason for selling, death in family. Price, on application. Address Mrs. John C. Ketchum, owner, R. D. No. 1, Schenectady, N. Y.

## SCHOHARIE COUNTY

Area, 647 square miles. Population, 23,855. Annual precipitation, 39 inches. Annual mean temperature, 48°. Number of farms, 3,288. County seat, Schoharie. This county is located in the eastern part of the state intersected by the Schoharie Creek, also drained by the Charlotte River and the Catskill and Cobleskill Creeks.

The surface is mostly hilly, the southern part being occupied by a range of highlands called the Helderbergs. This region is well timbered by oak, hickory, ash, sugar maple, elm and other trees. The soil in this section is a dark slate and gravelly loam. These hills decline and become less rugged toward the north and the dark slaty soil becomes more prevalent. In the northeastern part clay loam is quite prominent. Between these hills lie the valleys of Schoharie, Cobleskill and Fox Creeks, where the soil is a dark and yellow clay loam, deep and fertile. The county as a whole is adapted to pasturage, dairying and general farming. The county ranks second in hops and bees and sixth in the production of buckwheat. Some of the leading crops are corn, 97,520 bushels; oats, 573,010 bushels; buckwheat, 240,770 bushels; rye, 34,207 bushels; potatoes, 307,346 bushels; hops, 2,156,383 pounds; hay and forage, 114,376 tons. The valuation of all farm property is \$14,454,132, a gain of 16 per cent. since the census of 1900. The average price of farm land per acre is \$14.36. The price of improved land including buildings is \$29.12. There are a large number of farms listed in this bulletin that can be bought for considerably less than the average of improved land. Domestic animals reported are dairy cows, 26,138; hroaes, 8,237; swine, 9,645; sheep, 11,422; poultry, 191,463; production of milk, 13,748,588 gallons with a value of \$1,418,629, including all dairy products. There are 30 milk stations and factories in the county.

The D. & H. railroad with a branch extending to Sharon Springs, a popular health resort, intersects the northern part of the county. The waters of this popular health resort are held in high repute for their medicinal value. The establishment of a well equipped school of agriculture in Cobleskill is likely to be accomplished in the near future. The county has 1,202 miles of improved highways and 8 miles of state road. Excellent educational facilities are furnished by 179 district schools and the social and agricultural interests are conserved by 9 societies devoted to the interest of the farmer.

## TOWN OF BLENHEIM

Population 618

No. 1048.—Farm of 53 acres; 6 miles from Stamford P. O., R. D. 1 and railway station, on line of U. & D. R. R.;  $\frac{1}{2}$  mile from school and Methodist church; 6 miles from milk station. Highways, good. Nearest village, North Blenheim, 3 miles distant, reached by highway. Surface, rolling. Soil, clay loam. Acres in meadow, 7; natural pasture, 10; timber, 36, young pine and hard wood; acres tillable, 8. Fruit, few apple trees. Best adapted to hay. Fences, stone wall, poor condition. No buildings. Watered by springs. Five miles from Catskill Mountains and Mayham Lake. This would make an ideal place for summer home. Reason for selling, owner has other farms. Price, \$400. Terms, cash. Address Albert C. Mayham, owner, Warwick, N. Y., Orange county.

## TOWN OF BROOME

Population 933

No. 1049.—Farm of 60 acres; 10 miles from Middleburg P. O. and station on line of M. & S. R. R.;  $\frac{3}{4}$  mile from school;  $\frac{1}{4}$  mile from Methodist church; 1 mile from butter factory. Highways, good. Nearest village, Middleburg, population, 1,140, distant 10 miles. Surface, rolling. Altitude, 1,000 feet. Soil, gravelly loam. 20 acres of meadow; 25 acres of natural pasture; 15 acres of timber, mostly hard wood and hemlock; 45 acres, tillable. Fruit, apples, pears, cherries and plums. Land best adapted to raising hay, oats, corn and potatoes. Fences, mostly stone wall. House, 2 stories, with 21 rooms, in good condition, very suitable for large boarding house. Barn, 20x36, with room for 10 cows; outbuildings all in good condition. House has well water; barns and fields watered by springs. Reason for selling, old age of owner. Price, \$1,000. Terms, easy. Address Mrs. J. W. Vaughn, owner, Middleburg, N. Y., or Charles Mann, agent, Middleburg, N. Y.

No. 1050.—Farm of 253 acres; 9 miles from Middleburg P. O., R. D. 1, and railway station on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from church;  $2\frac{1}{2}$  miles from butter factory. Highways, good. Surface of farm, mostly level and rolling, some hilly. Soil, good, gravelly loam. Acres in meadow, 153; in natural pasture, 50; in timber, 50, mostly hard wood; acres tillable, 203. Fruit, 200 apple, 25 plum, 3 pear

trees, black and red raspberries and currants. Best adapted to dairying. Fences, stone and wire, good condition. Two houses, 24x30, good condition. Outbuildings: barn, 48x40; barn, 30x36; barn, 20x55; hog pen, 20x24; 2 hen houses, 10x14 and 10x40; new silo, good condition. Watered by running water. Occupied by owner. Reason for selling, poor health of owner. Price, \$2,700. Terms, \$1,000 cash, balance on mortgage at 5%. Address Charles S. Loyd, owner, Middleburg, N. Y., R. D. 1.

No. 1051.—Farm of 110 acres, 2 miles from Livingstonville P. O.; 9 miles from railway station at Middleburg on line of M. S. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 3 miles from creamery. Nearest large village, Middleburg, population, 1,114. Highways, good, part hilly and part level. Surface, rolling. Soil, loam. Acres in meadow, 40; in natural pasture, 10; in timber, 10; sugar bush of about 100 trees; acres tillable, 75. Fruit, 50 apple trees, pears and plums. Best adapted to buckwheat, corn, rye, oats, barley, potatoes, etc. Fences, stone wall and wire, in fair condition. House, 51x18, in good condition; another house, 31x21. Outbuildings: barns, 36x28, 40x18 and 30x40, in good condition. Watered by springs. This property is 7 miles from Crystal Lake. Occupied by owner. Reason for selling, to settle an estate. This is a very productive farm. Price, \$1,800. Address C. J. Cornelius, owner, Livingstonville, N. Y.

No. 1052.—Farm of 107 acres, located 5 miles from Middleburg P. O. and railway station on line of M. & S. R. R.;  $\frac{3}{4}$  mile from school; 2 miles from butter factory and Methodist church. Highways, good. Surface of farm, part level and part rolling. Altitude, 550 feet. Soil, gravelly loam. Acres in meadow, 77; in natural pasture, 15; in timber, 15, hemlock, ash, maple, etc. Acres tillable, 92. Fruit, apples. Best adapted to hay, corn, oats, buckwheat, etc. Fences, wire and stone, good condition. House, 7 rooms. Outbuildings: barn with large shed attached, hog pen and chicken house, good condition. Watered by well and springs. Worked by owner. Reason for selling, owner has another farm. Price, \$1,200. Terms, \$700 cash. Address Wm. Lamont, owner, R. D. 4, Middleburg, N. Y., or L. J. King, agent, Middleburg, N. Y.

No. 1053.—Farm of 100 acres, located 3 miles from Franklinton P. O.; 8 miles

rom railway station at Middleburgh on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from butter factory and Methodist church. Highways, good. Surface of farm, part level and part rolling. Altitude, 550 feet. Soil, gravelly loam. Acres in meadow, 100; in natural pasture, 30; in timber, 80, pine, hemlock, oak, etc. Acres tillable, 130. Fruit, apples and small fruit. Best adapted to general farming. Fences, mostly wire, good condition. Large house, 11 rooms, telephone. Outbuildings: barn, 30x40; good sheep barn, cow stable and wagon house combined, room for 10 cows and 10 sheep. Watered by well and stream. Occupied by owner. Reason for selling, advanced age of owner. Price, \$3,000. Terms, \$600 down and \$50 a month until \$1,000 is paid, remainder on mortgage. Address Dr. Shoemaker, owner, Cobleskill, N. Y., or L. J. King, agent, Middleburgh, N. Y.

No. 1054.—Farm of 96 acres, located  $\frac{1}{2}$  miles from Franklinton P. O.; 6 miles from railway station at Middleburgh on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from butter factory and Methodist church. Highways, good. Surface of farm, part level and part rolling. Altitude, 550 feet. Soil, loam. Acres in meadow, 61; in natural pasture, 15; in timber, 20, hemlock, ash, beech, etc. Acres tillable, 76. Fruit, apples and small fruit. Best adapted to hay, oats, corn, buckwheat, etc. Fences, wire and stone. House, 22x18, needs some repairs. Good barn, 18x25, with addition for hay barn. Watered by well and spring. Occupied by owner. Reason for selling, owner has other farms. Price, \$1,150. Terms, \$700 down and balance on mortgage at 5%. Address William J. Kennedy, owner, Middleburgh, N. Y., or L. J. King, agent, Middleburgh, N. Y.

No. 1055.—Farm of 216 acres, located  $\frac{1}{2}$  miles from Franklinton P. O.; 6 miles from railway station at Middleburgh on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from butter factory and Methodist church. Highways, good. Surface of farm, part level and part rolling. Altitude, 550 feet. Soil, loam. Acres in meadow, 156; in natural pasture, 30; in timber, 30, hemlock, ash, beech, etc. Acres tillable, 186. Fruit, apples, cherries, plums and pears. Best adapted to hay, corn, oats, buckwheat, etc. Fences, mostly wire, good condition.

House, 9 rooms, good condition. Outbuildings: barn, 30x25; barn, 25x15; wagon house, 20x25, and hog pen. Watered by well and springs. Occupied by owner. Large pond near farm, good fishing. Reason for selling, owner has other farms. Price, \$2,150. Terms, \$1,050 down and balance on mortgage at 5%. Would sell on contract of \$550 down and \$50 per month until \$1,050 is paid. Address W. J. Kennedy, owner, Middleburgh, N. Y., or L. J. King, agent, Middleburgh, N. Y.

No. 1056.—Farm of 150 acres, located 1 mile from Franklinton P. O.; R. D. 1; 6 miles from railway station at Middleburgh, on line of M. & S. R. R.; 1 mile from school and churches;  $\frac{1}{4}$  mile from butter factory. Highways, good. Surface of farm, 30 acres level, balance sloping. Soil, sandy loam. Acres in natural pasture, 20; in timber, 20. Acres tillable, 110. Fruit, 160 apple trees, also pears and small fruit. Best adapted to grain, corn and potatoes. Fences, wire and stone. House, 16 rooms, in good condition. Outbuildings: 2 barns, wagon house, corn crib and hen house, good condition. Watered, house and barn by well, fields by spring. Occupied by owner. Price, \$2,400. Address William Lamont, owner, R. D. 1, Middleburgh, N. Y., or Charles Wehrstedt, agent, 235 E. 33d st., New York City.

No. 1057.—Farm of 84 acres, located 1 mile from Franklinton P. O.; 7 miles from railway station at Middleburgh, on line of M. & S. R. R.; 1 mile from school, butter factory and Methodist church. Highways, good. Surface of farm, part level and part rolling. Altitude, 550 feet. Soil, loam. Acres in meadow, 65; in natural pasture, 15; in timber, 4, hardwood. Acres tillable, 80. Fruit, apples and small fruit. Best adapted to hay, corn, oats, etc. Fences, mostly wire, good condition. House, large, 9 rooms, good condition. Outbuildings: two large barns, hog pen, ice house and silo. Watered, house and barns by running water, fields by stream. Large pond on farm. Occupied by owner. Price, \$1,800. Terms, \$1,050, balance on mortgage at 5%. Reason for selling, other business. Address Alvin Russell, owner, Franklinville, N. Y., or M. L. Tator, agent, Middleburgh, N. Y.

No. 1058.—Farm of 286 acres, located  $1\frac{1}{2}$  miles from Franklinton P. O., R. D. 1;  $6\frac{1}{2}$  miles from railway station at

Middleburgh on line of M. & S. R. R.;  $1\frac{1}{2}$  miles from school and church; 1 mile from butter factory. Highways, good. Surface of farm, level, rolling and hilly. Acres in timber, 35, pine, hemlock, etc. Acres tillable, 250. Fruit, 150 apple trees, also plum and pear trees. Forty walnut and butternut trees. Best adapted to grain, hay, etc. Fences, wire and stone, good. House, 12 rooms, good. Outbuildings: 5 barns, hog pen and hen house. Watered, house by running water, barns and fields by springs. Brook runs through farm. Price, \$2,200. Terms, \$800 down. Address William Kennedy, owner, Middleburgh, N. Y., or Charles Wehrstedt, agent, 235 E. 33d st., New York City.

No. 1059.—Farm of 60 acres, located 3 miles from Livingstonville P. O., R. D. 1; 10 miles from railway station at Middleburgh on line of M. & S. R. R.; 1 mile from school and church. Surface of farm, level. Altitude, 1,000 feet. Soil, sandy loam. Acres in timber, 10, variety. Acres tillable, 50. Best adapted to corn, oats, potatoes, etc. House, 22 rooms. Outbuildings: barn, 40x50; hen house. Large sugar maple grove near house. Watered by running water. Reason for selling, advanced age of owner. Price, \$1,100. Terms,  $\frac{1}{4}$  down. Address S. Vaughan, owner, Middleburgh, N. Y., or Charles Wehrstedt, agent, 235 E. 33d st., New York City.

No. 1060.—Farm of 125 acres, located 6 miles from Middleburgh P. O., R. D. 1 and railway station on line of M. & S. railway;  $\frac{1}{2}$  mile from school,  $1\frac{1}{2}$  miles from Methodist church and  $1\frac{1}{2}$  miles from butter factory. Highways, good. Nearest village, Middleburgh, population 1,114, 6 miles distant, reached by highway. General surface, level and rolling. Nature of soil, loam. Acres in meadow, 95; in natural pasture, 20; in timber, 10, mostly hardwood. Acres tillable, 115. Fruit, 100 apple trees, 17 grape vines, cherries, plums and berries. Best adapted to general farming. Fences, mostly wire, in good condition. House, 2-family, 14 rooms, in good condition. Outbuildings: extra good. House watered by well, barns by well, fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$3,750. Terms, \$1,250 cash, balance, 5%. Address Geo. S. Rugg, owner, R. D. 1, Middleburgh, N. Y., or Tator & King, agents, Middleburgh, N. Y.

## TOWN OF CARLISLE

Population 1,024

No. 1061.—Farm of 100 acres, located  $\frac{3}{4}$  mile from Carlisle P. O.; 7 miles from railway station at Cobleskill on line of D. & H. R. R.;  $\frac{3}{4}$  mile from school, butter factory and Presbyterian church; 4 miles from cheese factory; 7 miles from milk station. Highways, good. Surface of farm, level and rolling except pasture land, which is hilly. Soil, loam and limestone. Acres in meadow, 25; in natural pasture, 10; in timber, 30, maple, hemlock, basswood, etc. Acres tillable, 60. Fruit, plums, cherries and apples enough for home use. Best adapted to corn, wheat, hay, potatoes and alfalfa. Fences nearly all wire, some stone wall. House, 28x36, with wing, 20x24, slate roof, good condition. Outbuildings: barn, 36x54, good condition; barn, 30x40, good condition; shed and hog pen, 22x50, good condition. and hen house, 12x30. Watered by well, spring and stream. Occupied by owner. Reason for selling, owner wants smaller farm. Price, \$3,000. Terms, \$2,000 cash, balance on easy terms. Address Geo. C. Hemstreet, owner, Carlisle, N. Y.

No. 1062.—Farm of 150 acres, located  $1\frac{1}{2}$  miles from Carlisle P. O.; 4 miles from railway station at Howe Cave on line of D. & H. R. R.;  $1\frac{1}{2}$  mile from school, churches and butter factory. Highways, somewhat hilly. Nearest large village, Cobleskill, population 2,088, 6 miles distant, reached by highway. Surface of farm, level. Good soil, mostly all tillable. Fruit, apples, plums, pears and grapes. Adapted to any crops grown in this climate. Fences in poor condition. House and barn in good condition. Watered, house and barn by running water, fields; by stream. Occupied by tenant. Reason for selling, owner a widow. Price, \$4,100. Terms,  $\frac{1}{4}$  down. Address Mrs. Eliza Burns, owner, Carlisle, N. Y.

## TOWN OF COBLESKILL

Population 3,579

No. 1063.—Farm of 165 acres, located  $2\frac{1}{2}$  miles from Cobleskill P. O. and railway station on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school, cheese factory and Methodist church;  $2\frac{1}{2}$  miles from milk station. Highways, good. Surface of farm, level. Soil, gravel loam. Acres in meadow, 25; in natural pasture, 12; in timber and pasture, 65. Acres tillable.

100. Fruit, apples, plums, cherries and pears. Best adapted to alfalfa, wheat, corn, oats and barley. Fences, wood and wire. House, 24x40; wing, 20x48. Outbuildings: barn, 30x50; barn, 24x45; stable, 40x15; stable, 55x15; horse barn, 22x45; wagon house, 20x35. Watered by well, springs and stream. Occupied by owner. Reason for selling, advanced age of owner. Price, \$14,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Sylvester Warner, owner, Warnerville, N. Y. Owner will rent on shares or with option to buy.

No. 1064.— Farm of 125 acres, located  $\frac{1}{10}$  mile from Grovenors Corners P. O.; 3 miles from railway station at Central Bridge on line of D. & H. R. R.; 500 feet from school and churches; 3 miles from milk station. Highways, good. Nearest village, Cobleskill, population 2,088, 6 miles distant and reached by highway. Surface of farm, level. Altitude, about 1,000 feet. Soil, yellow loam, clay and black soil. Acres in meadow, 60; in pasture, 10; in timber, 25, consisting of hemlock and hardwood. Acres tillable, 30. Fruit, apples, plums, cherries, pears and grapes. Best adapted to hay, oats, corn, rye and buckwheat. Fences, wire and rail, in good condition. Eleven-room house. Three barns, wagon house, hen house, hog pen and sheep barn. House is supplied with well and cistern water; barns, by well; fields, by wells and springs. Farm is situated within 3 miles of Schoharie River and Helderberg Mountains. Occupied by owner. Reason for selling, poor health. Price, \$5,000. Terms, part cash, balance on mortgage. There is also an 8-room tenant house and wood shed located on farm. Address Mrs. Roxie Slingerland, owner, Grovenors Corners, N. Y. Owner will rent.

No. 1065.— Farm of 96 acres; located  $\frac{1}{2}$  mile from Howe Cave P. O., R. D. 1 and railway station, on line of D. & H. R. R.; 600 feet from school;  $\frac{1}{4}$  mile from churches; 1 mile from milk station. Highways, stone road, in good condition. Nearest village, Cobleskill, population 2,088, 5 miles distant and reached by highway and rail. Surface of farm, rolling, bottom land along creek. Altitude, about 900 feet. Soil, dark loam, bottom land, gravel and sandy loam. Acres in meadow, 40; in pasture, 15; in timber, 15, consisting of hemlock, beech and maple. Acres tillable, 26. Fruit, plums, cherries, pears,

apples, also hickory nuts. Best adapted to corn, oats, wheat, rye and potatoes. Fences, stone wall, in good condition and wire. House, 3 barns and hen house, all connected; ice house, wood shed and pig pen. House and milk house are supplied with running water; barns, by spring water; fields, by springs. Premises are situated in vicinity of Helderberg Mountains and Cobleskill River bounds farm on south. Occupied by owner and tenant. Reason for selling, old age. Price, \$8,000. Terms,  $\frac{1}{2}$  down, balance on mortgage. Address Conrad Rickard, owner, Howe Cave, N. Y. Owner will rent.

## TOWN OF CONESVILLE

Population 708

No. 1066.— Farm of 120 acres, 1 mile from West Conesville P. O.; 6 miles from Grand Gorge railway station on line of U. & D. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 3 miles from butter factory and milk station. Highways, somewhat hilly but good. Surface, rolling. Soil, clay loam. Acres in meadow, 50; natural pasture, 40; timber, 30, hardwood, some hemlock. Acres tillable, 30. Fruit, 4 pear, 10 plums, and 20 apple trees, also grapes, strawberries and currants. Best adapted to oats, barley, buckwheat and corn. Fences, wire, wall and rail, in good condition. House, upright, 30x20, with wing, 36x16. Outbuildings: barn, 50x30, with shed; pigsty, wagon house, 30x32, with horse stable and granary, all in good condition. Watered by well and springs. Farm  $1\frac{1}{4}$  miles from Schoharie Creek, Catskill Mountains and Manorkill Creek. Occupied by owner. Price, \$1,800. Terms,  $\frac{1}{2}$  cash, balance on bond and mortgage. Address David N. Patrie, owner, West Conesville, N. Y. Owner will rent.

No. 1067.— Farm of 100 acres, located 2 miles from Manorkill P. O.; 12 miles from railway station at Grand Gorge on line of U. & D. R. R.; 15 miles from railway station at Middleburgh;  $\frac{1}{4}$  mile from school and butter factory; 2 miles from Methodist church. Highways, good. Surface of farm, some level and some rolling. Soil, gravelly loam. Acres in meadow, 60; in natural pasture, 25; in timber 15, mostly beech and maple. Acres tillable, 85. Fruit, 25 apple trees and some small fruit. Best adapted for dairy farm. Fences, stone and wire, good condition. Outbuildings: barn, 30x40; wagon house, 20x30, and hog pen, 15x20.

Watered, running water in house; barns, by water from trough; fields by springs. Occupied by owner. Reason for selling, advanced age and ill health of owner. Price, \$1,250. Terms, will sell on contract of \$200 cash and monthly payments. Address David Nickerson, owner, Manorkill, N. Y., or L. J. King, agent, Middleburgh, N. Y.

## TOWN OF FULTON

Population 1,450

No. 1068.—Farm of 320 acres, located  $1\frac{1}{2}$  miles from West Fulton P. O.; 7 miles from railway station at Middleburgh on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school and Methodist church;  $1\frac{1}{2}$  miles from butter factory. Highways, good. Surface of farm, part level and part rolling. Soil, loam. Acres in meadow, 170; in natural pasture, 50; in timber, 100, pine, hemlock and oak. Acres tillable, 220. Fruit, 100 apple trees, also pears, cherries and plums. Adapted to general farming. Fences, mostly wire, good condition. House, large, 14 rooms, good condition. Outbuildings: barn, 40x70; granary, hog pen and hen house, all in good condition. Watered by well and springs. Occupied by owner. Price, \$1,000. Terms, \$1,100 down, balance on mortgage at 5%. Address W. R. Shaddock, owner, Fultonham, N. Y., or M. L. Tator, agent, Middleburgh, N. Y.

No. 1069.—Farm of 165 acres;  $2\frac{1}{2}$  miles from post office; 9 miles from Richmondville, on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{3}{4}$  mile from Methodist church and milk station. Highways, somewhat hilly. Nearest village, Richmondville, population 599, reached by highway. Surface, a little rolling. Soil, gravel and limestone. Acres in meadow, 70; natural pasture, 60; timber, 30, oak, maple and beech. Acres tillable, 135. Fruit, about 35 apple trees. Best adapted to potatoes, buckwheat, barley and oats. Fences, stone wall, fair condition. House,  $1\frac{1}{2}$  stories, fair size, good condition. Outbuildings: quite a large barn, in fair condition; wagon house, pig pen. Watered by well and spring. Occupied by tenant. Reason for selling, owner has not the time to look after farm. A new railroad will soon be completed which will be within 4 miles of farm. Price, \$1,200 cash or \$1,250 and take payment of \$600 down. Owner will rent with option to buy. Address John

E. Wharton, owner, Summit, N. Y. Owner will rent.

No. 1070.—Farm of 9 acres;  $\frac{1}{2}$  mile from Middleburgh P. O. and railway station on line of D. & H. R. R.;  $\frac{1}{2}$  mile from high school and all churches; R. D. 1 from Middleburgh. Highways, good. Nearest large village, Middleburgh, population 1,114, reached by State road. Occupied by owner. Surface, level. Soil, loam. Acres tillable, 9. Best adapted to corn and vegetables. Fences, wire, good condition. House, 18 rooms, piazza, first-class condition. Outbuildings: barn, 30x40; corn house, 18x24; hen house, ice house and dancing hall. This place is situated on the Schoharie River. Reason for selling, advanced age of owner. Price, \$4,000. Terms, \$1,000 down, balance on mortgage. Address Mrs. F. Fonda, owner, Middleburgh, N. Y., or Chas. Wehrstedt, agent, 235 E. 33d st., New York City.

No. 1071.—Farm of 165 acres, located  $4\frac{1}{2}$  miles from Middleburgh P. O. and railway station, on line of M. & S. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{2}$  mile from Union church;  $4\frac{1}{2}$  miles from butter factory and milk station. Highways, level. Surface of farm, mostly level. Altitude, 700 feet. Acres in meadow 20; in natural pasture, 40; in timber, 10, hardwood, pine and hemlock. Acres tillable, 100. Fruit, apples and small fruit. Best adapted to wheat, corn, alfalfa, hay, etc. Fences, wire. House, large, good condition. Barn, 45x55, good condition. Watered by well. Occupied by tenant. Reason for selling, owner has too much land. Price, \$3,300. Terms, \$2,000 cash, balance easy. Address Emmet Hanes, owner, Middleburgh, N. Y., or Chas. Mann, agent, Middleburgh, N. Y.

## TOWN OF GILBOA

Population 1,467

No. 1072.—Farm of 110 acres;  $4\frac{1}{2}$  miles from Stamford P. O. and railway station on line of U. & D. R. R.;  $\frac{1}{2}$  mile from school and church;  $4\frac{1}{2}$  miles from butter factory. Highways, fairly good. Nearest village, Stamford, population 973, reached by highway. Surface, rolling. Acres in meadow, 30; natural pasture, 50; timber, 30, hardwood, some hemlock. Acres tillable, 50. Fruit, about 30 apple trees, few cherry trees. Best adapted to oats, potatoes, buckwheat and rye. Fences, mainly stone wall, in fair condition. House, 26x36, wood house attached, fair

condition. Barn, 30x40, stable attached, fair condition. Watered by springs. This would make a good dairy farm. Occupied by tenant. Price, \$1,800. Terms, part cash, balance on mortgage. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y., or M. S. Wilcox, agent, Jefferson, N. Y. Owner will rent.

## TOWN OF JEFFERSON

Population 1,280

No. 1073.— Farm of 240 acres;  $1\frac{1}{2}$  miles from Jefferson P. O.; 6 miles from railway station on U. & D. R. R.;  $\frac{1}{2}$  mile from school, churches, butter factory and milk station. Highways, fairly good. Nearest village, Stamford, population 973, reached by highway. Surface, rolling and level. Soil, good, gravelly loam. Acres in meadow, 60; natural pasture, 130; timber, 50; spruce and hemlock. Acres tillable, 120. Fruit, about 30 apple and a few pair trees. Best adapted to hay, oats, potatoes, buckwheat and rye. Fences, stone. House, 9 rooms, good condition. Outbuildings: barn and cow stable, 46x60; hog pen; granary and horse barn, 26x36, good condition. Watered, house, by well; barns and fields, by springs. Summit Lake, 7 miles distant. The spruce and hemlock standing on this farm put into timber would half pay for farm. Occupied by tenant. Reason for selling, owner desires to avoid care of farm. Price, \$20 per acre, depending on whether spruce and hemlock are reserved or sold with farm. Terms, small amount down, balance on mortgage. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y., or M. S. Wilcox, agent, Jefferson, N. Y. Owner will rent.

No. 1074.— Farm of 220 acres;  $1\frac{1}{2}$  miles from Jefferson P. O.; 6 miles from Stamford, on line of U. & D. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from churches; butter factory and milk station. Highways, fairly good. Nearest village, Jefferson, with 3 churches, 8 stores, high school, steam sawmill, 3 blacksmith shops, and hotel. Surface, rolling and level. Soil, good loam. Acres in meadow, 50; natural pasture, 110; timber, 60, maple, beech and ash. Acres tillable, 100. Fruit, apples. Best adapted to hay, oats, potatoes, buckwheat and rye. Fences, stone and wire, fair condition. House, large, 2 stories, built for summer boarders. Outbuild-

ings: barn, 60x46, recently built, basement cow stable attached to barn. Watered, house, by well; barns and fields, by springs. Delaware river, 6 miles distant. Occupied by tenant. Reason for selling, advanced age of owner. Price, \$20 per acre. Terms, part cash, balance on time. Address Harriet E. Wheeler, owner, 136 Lancaster street, Albany, N. Y., or M. S. Wilcox, agent, Jefferson, N. Y. Owner will rent.

No. 1075.— Farm of 190 acres; located  $3\frac{1}{2}$  miles from Middleburg P. O. and railway station on line of M. & S. R. R.;  $\frac{1}{4}$  mile from school and church. Highways, good. Surface of farm, part level, part side hill. Soil, loam. Acres in natural pasture, 40; in timber, 70. Acres tillable, 80. Fruit, 50 apple trees. Best adapted to grain, corn, potatoes, etc. Fences, wire and stone, good. House, new, 8 rooms and piazzas. Outbuildings: barn, 30x40; barn, 18x36 and hog pen. Watered, house by well; barn and fields, by springs. Occupied by owner. Price, \$1,650. Terms, \$650 down, balance on time to suit purchaser. Four-acre hop yard on this farm. Address Lymor Kathers, owner, Middleburgh, N. Y., or Chas. Wehrstedt, agent, 235 East 33d street, New York City.

No. 1076.— Farm of 100 acres;  $2\frac{1}{2}$  miles from Middleburg P. O. and railway station on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches and butter factory. Nearest village, Middleburgh, population 1,114,  $2\frac{1}{2}$  miles distant, reached by highway. Surface, level. Soil, good. Acres in meadow, 15; natural pasture, 12; in timber, 25. Acres tillable, 65. Good fruit. Best adapted to hops, oats, corn, and potatoes. Fences in good condition. Cottage house, 10 rooms, all painted and in good condition. Watered by well and springs. Occupied by owner. Reason for selling, illness in owner's family. Price, \$2,200. Terms, easy. Address Barner Aker, owner, East Cobleskill, N. Y., or Charles Mann, agent, Middleburgh, N. Y.

No. 1077.— Farm of 150 acres; located 4 miles from Schoharie P. O. and railway station on line of M. & S. R. R.;  $1\frac{1}{2}$  miles from school; 4 miles from churches; 4 miles from butter and cheese factory. Highways, good, some hilly. Population of Schoharie 996, reached by highway. General surface, mostly level, some rolling. Acres in meadow,

69; in pasture, 60; 6 acres in hops; in timber, 30, hardwood and pine. Acres tillable, 120. Fruit, apples, pears, peaches, etc. Best adapted to dairying, sheep raising, grain, hops, etc. Fences, barbed wire, fine condition. House, 2 stories, fine condition. Tenant house, fine condition. Outbuildings: large barn and sheds, hop house, engine house, fine condition. House and barns watered by pipe from springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$4,000. Terms on application. Address Frank Stephens, owner, Schoharie, N. Y.

No. 1078.—Farm of 220 acres; 6 miles from Middleburgh P. O. and station on line of the M. & S. R. R.;  $1\frac{1}{2}$  miles from school and Methodist church;  $1\frac{1}{2}$  miles from butter factory. Highways, good. Nearest village, Middleburgh, population 1,114, distant about 6 miles. Surface, rolling. Altitude, 1,200 feet. Soil, slate. 40 acres of natural pasture; 25 acres of timber, hardwood and hemlock. Acres tillable, 190. Fruit, apple and small fruit trees. Adapted to raising of hay, oats, potatoes and buckwheat. Fences, rail. House, in cottage style, 9 rooms; tenant house, 8 rooms. Barn, 28x68, and all outbuildings in good condition. House has well water; barns and fields have running water. Crystal Lake, 3 miles distant. This would make a very fine dairy and sheep farm, and is very productive. Occupied by owner. Reason for selling, poor health of owner. Price, \$1,700. Address George Ingraham, owner, Middleburgh, N. Y., or Charles Mann, agent, Middleburgh, N. Y.

No. 1079.—Farm of 140 acres;  $\frac{3}{4}$  mile from Middleburgh P. O. and station on line of M. & S. R. R.; 1 mile from school, Protestant churches and butter factory. Highways, level. Nearest village, Middleburgh, distant about 1 mile, population 1,114, reached by highway. Surface, level. Soil, a very fine loam. 20 acres of meadow; 20 acres of natural pasture; 10 acres of timber, hardwood, pine and hemlock; 130 acres, tillable. Fine young orchard, besides pears, plums, cherries, peaches, and other small fruit. Adapted to raising of alfalfa, hay, wheat, corn and rye. Fences, wire, in good condition. New 2-story house, 10 rooms, in fine condition. Barn, 45x65, with shed, corn crib, hop house, hen house, wagon house; all outbuildings in good repair. House and barns have well water; fields have running

water. This is a very fertile farm and a good money-maker. Occupied by tenant. Reason for selling, old age of owner. Price, \$9,500. \$2,000 cash with easy terms. Address Albert Snyder, owner, Middleburgh, N. Y., or Chas. Mann, agent, Middleburgh, N. Y.

No. 1080.—Farm of 319 acres;  $3\frac{1}{2}$  miles from Middleburgh P. O., R. D. 1. and station on line of M. & S. R. R.; 1 mile from school;  $3\frac{1}{2}$  miles from churches and butter factory. Good crushed-stone roads. Nearest village, Middleburgh, population 1,114, distant about  $3\frac{1}{2}$  miles by highway. Surface, hilly, rolling, and some level. Soil, slaty loam. 30 acres of meadow; 50 acres of natural pasture. 80 acres of timber; 18,000 feet of hemlock, besides beech, birch and maple in abundance. Acres tillable, 200. Over 100 fine apple trees. Crops of alfalfa, hay, rye, oats, corn and potatoes can be raised. Good wire fences. Seven-room cottage, in good condition; 2 story house of 6 rooms. Barns: 30x40 with cow shed for 25 cows, and fine silo; another 80 feet long, for sheep; with all outbuildings in good condition. House has well water; barns have running water; fields have springs. A fine dairy and sheep farm, also 10 acres of good hops. Occupied by tenant. Possession can be given at once. Reason for selling, owner has too much other business. Price, \$3,300. Terms, \$1,500 down, remainder on easy payments. Address Alonzo Almey, owner, Middleburgh, N. Y., or Chas. Mann, agent, Middleburgh, N. Y.

No. 1081.—Farm of 150 acres;  $2\frac{1}{2}$  miles from Middleburgh P. O. and station on line of the M. & S. R. R.;  $\frac{1}{2}$  mile from school;  $3\frac{1}{2}$  miles from Protestant churches and butter factory. Highways, good. Nearest village, Middleburgh, population 1,114,  $3\frac{1}{2}$  miles distant by highway. Surface, rolling. Altitude, 700 feet. Soil, limestone. Acres in meadow, 25; in natural pasture, 40; in timber, 50. Acres tillable, 100. Over 50 fine apple trees, pears, plums, peaches and small fruit. Adapted to raising of hay, rye, corn, oats, alfalfa and clover. Fences, wire. House, 2 stories, 15 rooms, painted. Barn, 40x60, in fine condition, with wagon house, hen house, ice house and a good sawmill. House is watered by well water; barn, by running water; fields, by brooks. This is a fine dairy farm, with sawmill and good water power. Occupied by owner. Reason for selling, owner tired

of farming. Price, \$3,200. Terms, easy. Address Sylvester Bixby, owner, Middleburgh, N. Y., or Chas. Mann, Middleburgh, agent, N. Y.

No. 1082.— Farm of 70 acres; located 2 miles from Huntersland P. O.; 5 miles from railway station at Middleburgh on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from butter factory and Protestant churches. Highways, good. Surface of farm, rolling. Soil, gravelly loam. Acres in meadow, 50; in natural pasture, 10; in timber, 10, hemlock, pine, beech, maple, etc. Acres tillable, 10. Fruit, apples, pears and plums. Best adapted to wheat, corn, rye, hay and potatoes. Fences, mostly wire, good condition. House, 8 rooms, good condition. Outbuildings: barn, 32x45; wagon house, 25x30; linter, 33x16; pig pen and hen house, all in good repair. Watered by springs. Occupied by tenant. Reason for selling, owner lives in city and cannot attend to farm. Price, \$1,350. Terms, \$1,050 down, balance on mortgage. Address James K. Alverson, owner, Albany, N. Y., or M. L. Tator, agent, Middleburgh, N. Y.

No. 1083.— Farm of 116 acres; located  $\frac{1}{4}$  mile from Huntersland P. O., 5 miles from railway station at Middleburgh on line of M. & S. Ry.;  $\frac{3}{4}$  mile from school, churches and butter factory. Highways, good. Surface of farm, level. Soil, loam. Acres in meadow, 76; in natural pasture, 20; in timber, 20, hemlock, etc. Acres tillable, 96. Fruit, 40 apple trees and considerable small fruit. Best adapted to oats, hay, buckwheat and hops. Fences, wire and board, good condition. House, 15 rooms, excellent condition. Outbuildings: barn, 54x24; shed, 44x24, new hog pen; hop house, etc. Watered, house and barn, by well; fields, by spring. Occupied by owner. Reason for selling, owner wishes to retire from business. Price, \$2,750. Terms, \$1,250 cash, balance at 5%. Address Alfred Durfee, owner, Huntersland, N. Y., or M. L. Tator, Middleburgh, N. Y.

No. 1084.— Farm of 67 acres; located 2 miles from Middleburgh P. O., R. D. No. 2 and railway station on line of M. & S. R. R.;  $\frac{3}{4}$  mile from school, butter factory and churches. Highways, good. Surface of farm, part level and part rolling. Soil, gravelly loam. Acres in meadow, 57; in natural pasture, 6; in timber, 4, mostly hardwood, some

hemlock. Acres tillable, 63. Fruit, 75 apple trees. Best adapted to hay, oats, corn, etc. Fences, mostly wire, good condition. House, 6 rooms, fair condition. Outbuildings: barn, 70x20; barn, 20x20, and shop, 12x12, fair condition. Watered by well, creek and springs. This farm is 3 miles from Crystal Lake. Occupied by owner. Reason for selling, owner in other business. Price, \$1,200. Terms, \$700 down, balance on mortgage at 5%. Address Burton Warner, owner, R. D. No. 2, Middleburgh, N. Y., or L. J. King, agent, Middleburgh, N. Y.

No. 1085.— Farm of 60 acres; located  $1\frac{1}{2}$  miles from Middleburgh P. O. and railway station on line of M. & S. R. R.;  $1\frac{1}{2}$  miles from High School;  $1\frac{1}{2}$  miles from churches;  $1\frac{1}{2}$  miles from butter factory and condensing plant. Highways, good. General surface, part level and part rolling. Nature of soil, sand and loam. Acres in meadow, 10; in natural pasture, 5; in timber, 40, pine, hemlock, oak, maple, etc. Acres tillable, 20. Fruit, 20 cherry, 12 peach, 6 pear and 100 apple trees. Best adapted to gardening, grain, corn and potatoes. Fences, wire, good condition. House, 9 rooms, built 3 years ago. Outbuildings: barn 32x34, with basement, poultry house, hog pen, and wagon shed, all new. House, watered by running water; barns, by spring and fields, by spring. Schoharie River, 1 mile distant. Occupied by owner. Reason for selling, death in family. Price on application. Terms, easy. Will take city property in exchange. Address Chas. Wehrstedt, owner, 35 E. 33d street, New York City.

No. 1086.— Farm of 100 acres; located  $2\frac{1}{2}$  miles from Middleburgh P. O., and railway station on line of M. & S. R. R.;  $1\frac{1}{2}$  miles from school;  $1\frac{1}{2}$  miles from churches, and  $2\frac{1}{2}$  miles from butter factory. Highways, a little hilly but good. General surface, level. Nature of soil, loam. Acres in meadow, 20; in natural pasture, 10; in timber, 20, pine, hemlock, oak, etc. Acres tillable, 80. Fruit, large apple orchard. Best adapted to grain, corn, potatoes, etc. Fences, wire, good condition. House, 10 rooms, fair condition. 2 barns, fair condition. House and barns watered by well; fields, by springs. Reason for selling, ill health. Price, \$1,000. Terms, small payment down, balance easy. Address W. Keller, owner, 333 East 34th st., New York City, or Chas. Wehrstedt, agent, 235 E. 33d street, New York City.

## TOWN OF SEWARD

Population 1,419

No. 1087.— Farm of 24 acres; 1 mile from Dorloo P. O.; 2 miles from railway station at Seward on line of D. & H. R. R.; 1 mile from school and church; 2 miles from milk station. Highways, good. Nearest large village, Cobleskill, population 2,088, 9 miles distant, reached by rail and highway. Surface of farm, mostly rolling, some level. Soil, clay and gravel. Acres in meadow, 12; in natural pasture, 3; in timber, 9. Acres tillable, 15. Fruit, apples, pears, plums and berries. Best adapted to hops and all kinds of grain. Fences, board and wire, fair condition. House, 20x25, with wing, 15x20, fair condition. Outbuildings: barn, 20x30; hop house, 25x30; hen house in basement of barn; small wood house, hog pen, fair condition. Watered, house by well; barns by creek; fields by springs. Occupied by tenant. Reason for selling, death of wife. Price, \$900. Terms,  $\frac{1}{2}$  cash, balance on bond and mortgage. Address Barney Vrooman, owner, Hyndsville, N. Y. Owner will rent.

## TOWN OF SHARON

Population 1,825

No. 1088.— Farm of 98 acres; located  $\frac{1}{2}$  mile from Sharon Springs P. O.;  $\frac{1}{4}$  mile from railway station at Sharon Springs on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 1 block from Methodist church;  $\frac{1}{2}$  mile each to Episcopalian and Catholic;  $\frac{1}{4}$  mile from butter factory and milk station. Highways, good. Surface of farm, level and slightly rolling. Altitude, 1,500 feet. Soil, black loam. Acres in meadow, 60; in natural pasture, 10; in timber, 10, consisting of maple and oak. Acres tillable, 88. Fruit, apples, pears, currants and berries. Best adapted to hay, oats, buckwheat and rye. Houses were destroyed. Barn, fair condition. Watered: house and barn are supplied by village water; fields, by streams, springs or village water. Reason for selling, owner lives outside the State and cannot attend to it. Price, \$3,000. Terms, \$1,000 cash, balance on mortgage. Sharon Springs is a noted summer resort and well patronized; 15 hotels located there. Address Elizabeth S. Crannell, owner, 6823 Thomas Boulevard, Pittsburgh, Pa.

## TOWN OF WRIGHT

Population 963

No. 1089.— Farm of 216 acres; 3 miles from Quaker Street P. O.;  $3\frac{1}{4}$  miles from railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches; R. D. 1 from Central Bridge;  $3\frac{1}{4}$  miles from creameries. Highways, somewhat hilly but good. Nearest village, Schoharie, population 996, 6 miles distant, reached by highway. Occupied by tenant. Surface, mostly rolling and level, some side hills. Soil, clay loam and limestone. Acres in timber, 15, pine, oak and beech. Acres tillable, 160. Fruit, about 150 apple trees, a few cherries and pears. Best adapted to hay, grain and rye. Fences, wire, stone and stump, poor condition. House, 15 rooms, good condition. Telephone in house. Large storage house for straw and baled hay; wagon house and barn, good condition. Watered by well and brook. Reason for selling, to settle estate. Fish pond could easily be constructed on this farm. Price, \$7,000. Terms, \$4,000 down, balance on bond and mortgage. Address Eugene Hardin, owner, 322 Manning Boulevard, Albany, N. Y.

No. 1090.— Farm of 120 acres; 3 miles from Schoharie P. O., R. D. 1; 3 miles from railroad station at Schoharie on line of M. & S. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{4}$  miles from churches, Methodist and Reformed;  $1\frac{1}{4}$  miles from butter factory; 3 miles from cheese factory; 3 miles from milk station. State roads and no hills. Nearest village, Schoharie, population 996, reached by highway. Surface,  $\frac{1}{2}$  level,  $\frac{1}{2}$  sloping to northeast. Altitude, about 700 feet. Soil, dark and yellow loam and lime. 36 acres in meadow; 20 acres in natural pasture; 30 acres in timber, hemlock, pine, beech, oak, maple and red cedar. There are about 500 trees, quite large timber, and 200 sugar maples, large and medium size; 80 acres tillable. Fruit consists of 100 apple and a few plum, peach and cherry trees and grapes. Land best adapted to corn, hops, oats, rye and hay. Stone, board and wire fences, in fair condition. 2-story frame house, 30x24, 9 rooms, in good condition, partly new, with large porch. Two barns, 36x48 and 30x60, adjoining. 16 feet high; cow and horse stable in 1 barn; up-to-date chicken and hop house, 24x60. Watered, house by wells; barns by wells; fields by springs and creek.

Fox's Creek on one line; Warner's Lake, 9 miles distant. Occupied by owner. Reason for selling, advanced age of owner. Price, \$5,000, reasonable, part down. Will sell farm without timber

for \$3,400. Address J. W. Taylor, Schoharie, N. Y., or S. F. Taylor, owners, 306 Quail Street, Albany, N. Y. Owners will rent with option to buy.

### SCHUYLER COUNTY

Area, 335 square miles. Population 14,004. Annual precipitation, 36.99 inches. Annual mean temperature, 48.4°. Number of farms, 1,920. County seat, Watkins.

The county is situated in the south central part of the state. The lower part of Seneca Lake extends into this county. The surface is undulated with gentle inclination from each side to Seneca Lake and Kayuta Creek. Springs abound in every section of the county, furnishing an abundant supply of pure water, which finds its way to the lake through deep ravines which occur on either side along the shore. Near the lake the soil is very fertile, sandy and gravelly loam predominating, while clay loam prevails in the rest of the county. Natural gas is found in large quantities. In this county are located the largest salt producing plants in the world. The leading crops are reported as follows: Corn, 134,500 bushels; oats, 291,237 bushels; wheat, 83,906 bushels; barley, 30,259 bushels; rye, 28,024 bushels; dry beans, 15,237 bushels; potatoes, 365,815 bushels; hay and forage, 44,344 tons. The total value of all farm property is \$9,263,801, an increase of 10 per cent. over the census of 1900. Domestic animals reported are dairy cows: 5,945; horses, 5,392; swine, 5,401; sheep, 22,982; poultry, 88,114; total production of milk, 3,222,190 gallons, which with the products of 5 milk stations and factories sold for \$174,342.

The county is intersected by the Northern Central, a part of the Pennsylvania system and branches of the Lehigh Valley and New York Central railroads. In this county is located the famous Watkins Glen State Park, which is visited by thousands of people annually, because of its wonderful beauty and attractive features. There are 105 district schools in the county and Cook Academy, one of the famous preparatory schools of the state, is located near Watkins. The county has 573 miles of improved highway and 10 miles of state and county roads. Most of the products of the county are sold in local markets, but Buffalo, New York, and Philadelphia furnish unlimited markets for the products of the county. Schuyler county lies in the fruit belt of the state, where a good deal of attention is given to the cultivation of apples, pears, peaches, grapes and small fruits.

#### TOWN OF CATHARINE

Population 1,222

No. 1091.— Farm of 110 acres; 4½ miles from Alpine P. O., R. D. 2; 5 miles from railway station at Odessa on line of L. V. R. R.; 1 mile from school; 2 miles from churches; 5 miles from milk station. Highways, good. Nearest city, Ithaca, population 14,802, 11 miles distant, reached by highway. Surface of farm, level and rolling. Soil, gravel and loam. Acres in meadow, 60; in natural pasture, 19; in timber, 30, hemlock, chestnut and hardwood. Acres tillable, 80. Fruit, 60 apple, 4 pear and 3 plum trees. Best adapted to buckwheat, oats, barley and wheat. Fences, mostly stump and rail, good condition. House, 6 rooms, good condition. Outbuildings: barn, 32x44, gambrel roof, good condition, shed attached, 24x50, gambrel roof; horse and carriage barn, 32x44, good condition. Watered, house by well; barn by running water; fields by stream. A small lake is

1½ miles from farm. Occupied by tenant. Reason for selling, owner wants to retire. Price, \$3,000. Terms, ½ down. Address Lewis W. Erway, owner, Odessa, N. Y. Owner will rent with option to buy.

#### TOWN OF DIX

Population 3,625

No. 1092.— Farm of 70 acres; 6 miles from Watkins P. O., R. D. 3; 4 miles from railway station at Beaver Dams on line of N. Y. C. R. R.; ½ mile from school, churches and grange hall; 4 miles from milk station. Highways, good. Nearest city, Elmira, population 37,176, 15 miles distant, reached by highway and rail; village of Watkins, 5 miles distant. Surface, rolling and level. Altitude, about 1,200 feet. Soil, black and gray loam. Acres in meadow, 15; in natural pasture, 10; in timber, 5, maple and hemlock. Acres tillable, 40. Fruit, 25 peach, 12 pear, 5 quince. 25

plum, 80 apple trees, grapes and 100 strawberry plants. Best adapted to corn, oats, potatoes, wheat, buckwheat, rye, etc. This is a good farm for raising fruit, especially cherries, as it is sheltered from the north winds. Fences, road and line fences, American wire. House, large, well built, excellent condition. Outbuildings: barn, 70x40, gambrel roof, in excellent condition, except roof. Watered, 2 springs piped to house and barn. Occupied by owner. Reason for selling, owner a widow and cannot attend to farm. Price, \$4,000. Terms,  $\frac{1}{2}$  cash, balance on bond and mortgage. Address Mrs. Jennie M. Lockwood, owner, Watkins, N. Y., R. D. 3. Owner will rent.

No. 1093.—Farm of 40 acres; located 3 miles from Watkins P. O., R. D. 3; 2 miles from Watkins railway station on line of N. Y. C. & H. R. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches; 2 miles from milk station; milk collected at door. Population of Watkins 2,817, reached by highway. Altitude, 800 feet; nature of soil, clay loam. Acres in meadow, 10; in pasture, 10; in timber, 18, second growth. Acres tillable, 20. Fruit, 500 cherry and 20 apple trees. Best adapted to wheat, rye, corn, hay and potatoes. Fences, woven wire. House destroyed by fire. Outbuildings: barn, 24x36, needs repairs; hen house, corn crib. House and barns watered by well; fields, by creek. Occupied by owner. Price, \$800. Terms, \$550 cash. Address Mrs. A. N. Jarvis, owner, Watkins, N. Y.

No. 1094.—Farm of 122 acres; located 5 miles from Watkins P. O., R. D. 4;  $\frac{1}{2}$  mile from railway station at Wentz on line of N. Y. C. & H. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches, creamery; wagon going to Dundee passes farm. Highways, hilly but good. Surface of farm, rolling and level. Altitude, 1,300 feet. Soil, loam and gravel. Acres in meadow, 55; in natural pasture, 5; in timber, 22, pine and hemlock. Acres tillable, 95. Fruit, apples, peaches, pears, plums and cherries. Best adapted to potatoes, hay, wheat, sheep and general farming. Fences, woven wire, all built within last 5 years. House, 6 rooms, summer kitchen and wood house, good condition. Outbuildings, barn built in 1910, 64x36, basement; hen house and pig pen built in 1908, all newly painted. Watered by well and springs. Occupied by tenant.

Reason for selling, owner in other business. Price, \$6,000. Terms, cash preferred, would accept \$1,000, balance on mortgage. Address Bert R. Wixson, owner, Central Y. M. C. A., Room 300. Philadelphia, Pa. Owner will rent with option to buy.

## TOWN OF HECTOR

Population 3,514

No. 1095.—Farm of 60 acres; located 1 mile from post office, R. D.; 5 miles from railway station at Burdett on line of L. V. R. R.; 1 mile from school and Methodist church; 3 miles from milk station. Highways in fair condition. Altitude, 1,000 feet. Soil, gravelly loam. Acres in meadow, 10; in natural pasture, 10; in timber, 10, chestnut and oak. Acres tillable, 30. Fruit, 25 apple, 2 pear trees and some cherries. Best adapted to oats, wheat, corn, potatoes, beans and buckwheat. Fences, rail and stump, poor condition. House, 10 rooms, good condition. Outbuildings: barn, 30x40, with straw shed attached; barn with basement, good condition. Watered, house by well; barn by spring; fields by spring. Reason for selling, ill health of owner. Price, \$1,500. Terms, cash. Address Leroy Welch, owner, Burdette, N. Y.

No. 1096.—Farm of 90 acres; located 1 mile from Burdette P. O., R. D. and railway station on line of Lehigh Valley R. R.; 1 mile from school and churches; 1 mile from butter factory and milk station. Highways, hilly but good. Nearest village, Watkins, population 2,817,  $3\frac{1}{2}$  miles distant, reached by highway. General surface, level and rolling. Nature of soil, gravel and clay loam. Acres in meadow, 30; in pasture, 4; in timber, 4, second growth; acres tillable, 80. Fruit, 380 apple trees, 2 acres pears, 1,200 plums, 35 cherries, about 6 acres peaches, old, 18 acres grapes, 25 quince and 25 prune trees. Best adapted to fruit, vegetables, grain and hay. House burned; owner finished off several rooms in fruit house, now used as residence. Outbuildings: barn, 40x100, basement under all; poultry house and hog house. Farm borders Seneca Lake for  $\frac{1}{2}$  mile. Occupied by owner. Reason for selling, too much to look after. Price, \$7,500. Terms, \$2,500 down, balance at 6 %. Summer resort borders farm, 15 cottage sites on farm. Address John E. and Marion J. Albright, owners, R. D., Burdette, N. Y., or G. A.

Burris Realty Co., agents, 218 East Water street, Elmira, N. Y.

No. 1097.—Farm of 21 acres; located 2 miles from Hector P. O., R. D. 1 and railway station on line of Lehigh Valley R. R.;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{2}$  mile from butter factory and milk station. Highways, good condition. General surface, level and rolling. Altitude, 700 feet. Nature of soil, sandy loam and muck. Acres in meadow, 10; in pasture, 1; in timber,  $2\frac{1}{2}$ ; acres tillable,  $18\frac{1}{2}$ . Fruit, 12 cherry, 4 pear and 14 apple trees; 50 grape vines and some red raspberries. Best adapted to fruit and general farm crops. Fences, wire and rail. No house or barns. Reason for selling, owner not able to work land. Price, \$900. Terms, cash. Address P. A. Brown, owner, R. D. 1, Hector, N. Y.

No. 1098.—Farm of 60 acres; located  $1\frac{1}{2}$  miles from Hector P. O., R. D. 1; 1 mile from railway station at Hector on line of L. V. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from milk station;  $1\frac{1}{2}$  miles from Presbyterian church; 3 miles from Methodist church. Highways, good. Nearest large village, Watkins, population 2,817, 7 miles distant, reached by highway. Surface of farm, sloping. Altitude, about 900 feet. Soil, clay loam. Acres in meadow, 10; in natural pasture, 4; in timber, 6, oak, hickory and maple. Acres tillable, 54. Fruit, 3,000 peach, 70 plum, 125 cherry, 20 apple and 16 pear trees, and 15 acres of grapes. Best adapted to fruit, corn, wheat, oats and hay. Fences, wire and rail, fair condition. Large brick house, 11 rooms, good condition. Outbuildings: barn, 32x60, good condition; hen house, fruit house, wood house, ice house and garage. Watered, house by well and cistern; barn by running water; fields by springs. This farm borders on Seneca Lake for about 40 rods. Occupied by owner. Reason for selling, owner wishes to retire from business. For price and terms, address Eugene Erway, owner, Hector, N. Y.

No. 1099.—Farm of 40 acres; located  $1\frac{1}{2}$  miles from Hector P. O., R. D. 1; 1 mile from railway station at Hector, on line of L. V. R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{2}$  miles from Methodist church; 3 miles from milk station. Highways, good. Nearest large village, Watkins, population 2,817, 7 miles distant, reached by highway. Surface of farm, sloping. Altitude, about 900 feet. Soil, clay

loam. Acres in meadow, 10; in timber, 1, oak and hickory. Acres tillable, 39. Fruit, 1,000 peach, 6 pear, 4 apple and 6 cherry trees, also 3 acres of grapes. Best adapted to fruit, wheat, corn, oats and hay. Fences, wire, fair condition. Large frame house, good condition. Outbuildings: small barn, in poor condition, and hen house. Watered by well and spring. Occupied by tenant. Reason for selling, owner wishes to retire from business. For price and terms, address Eugene Erway, owner, Hector, N. Y.

## TOWN OF MONTOUR

Population 1,608

No. 1100.—Farm of 32 acres;  $1\frac{1}{2}$  miles from Montour Falls P. O., R. D. 1, and railroad station on line of the Penn. R. R.; 1 mile from school;  $1\frac{1}{2}$  miles from Protestant churches and milk station. Highways, good. Nearest village, Montour Falls, population 1,208,  $1\frac{1}{2}$  miles distant, by highway and trolley. Surface,  $\frac{1}{2}$  level and  $\frac{1}{2}$  rolling; excellent locality for fruit growing and poultry raising. Soil, gravelly loam. Acres tillable, 32. Fruit, 6 cherry, 8 pear, 40 apple trees, all standard varieties. Land adapted to all crops. Fences, mostly wire. Seven-room house. Barn, 30x40. House and barn watered from well; fields, by springs. Seneca Lake is 4 miles distant, reached by macadam road and trolley. Montour Falls is a thriving manufacturing town, with high schools and academy. Occupied by owner. Reason for selling, owner has 2 other farms. Price, \$1,800. Terms, \$1,000 down, mortgage for balance. Address Chas. L. Doolittle, owner, Montour Falls, N. Y., R. D. 1.

No. 1101.—Farm of 105 acres; located 2 miles from Montour Falls P. O. and railway station on line of Northern Central R. R.; 1 mile from school; 2 miles from churches. Highways, somewhat hilly but good. Surface of farm, rolling. Soil, sand and loam. Acres in meadow, 14; in natural pasture, 20; in timber, 35, oak, hickory, walnut, pine, chestnut, basswood, etc. Acres tillable, 70. Fruit, apples, peaches, plums and grapes. Fences, wire and rail, poor condition. House, 24x32; wing, 15x24, 2 stories, 11 rooms, in fine condition. Outbuildings: a good barn, 42x48; chicken coop, etc. Watered, house by well; barns by creek; fields by springs. Reason for selling, owner lives too far away to look after farm. Price, \$3,500. Terms, \$1,000, re-

mainder on mortgage at 5%. Address Joseph A. Fitzpatrick, owner, 506 Baldwin street, Elmira, N. Y. Owner will rent.

No. 1102.—Farm of 80 acres; located 1 mile from P. O. and 1 mile from railway station on line of Northern Central R. R.;  $\frac{1}{2}$  mile from trolley line; 1 mile from school;  $1\frac{1}{2}$  miles from churches and milk station;  $\frac{1}{4}$  mile from butter factory. Highways, a little rolling. Surface of farm, comparatively level. Soil, gravelly. Acres tillable, 70. Fruit, cherries, plums, pears and apple orchards. Best adapted to wheat, rye, oats, buckwheat, corn and beans. Fences, mostly wire, fair condition. House, 2 stories, 9 rooms, good condition. Out-buildings: corn house, 14x25; barn, 30x50, good condition, and 2 sheds in fair condition. Watered, house and barn by well; fields, by springs. Price, \$4,500. Terms, \$2,000 down, balance on mortgage at 6%. Address Mrs. Alice Drake, owner, Montour Falls, N. Y. Owner will rent.

#### TOWN OF ORANGE

Population 1,087

No. 1103.—Farm of 47 acres; located  $1\frac{1}{2}$  miles from North Monterey P. O., R. D. 1;  $7\frac{1}{2}$  miles from railway station at Beaver Dams on line of N. Y. C. R. R. Population of Monterey 277, reached by good highway. General surface, level and hilly. Altitude, 1,400 feet. Acres in meadow, 16; in pasture, 16; in timber, 15, beech, basswood and hemlock. Acres tillable, 16. Fruit, 6 apple trees. Best adapted to oats, corn, buckwheat and potatoes. Fences, fair. House, 7 rooms, fair condition. Barn, 30x40. House and barn watered by springs. Occupied by tenant. Price, \$1,000. Terms, \$200 down, balance on mortgage. Address M. D. Lockwood, owner, Monterey, N. Y.

No. 1104.—Farm of 150 acres; located 3 miles from Monterey P. O.; 10 miles from railway station at Cooper's Plain on line of Erie R. R.; 2 miles from school; 3 miles from churches. Population of Monterey 277, reached by highway. General surface, rolling. Altitude, 1,900 feet. Acres in timber, about 75, chestnut, some pine. Best adapted to oats, wheat and potatoes. Fences, poor. House, small hut. Small barn. House watered by well, barn by spring. Reason for selling, to settle estate. Price, \$500. Terms, cash. Address Lewis Kelly Estate, Monterey, N. Y.

No. 1105.—Farm of 122 acres; located  $3\frac{1}{2}$  miles from Beaver Dams P. O., R. D. No. 1; 1 mile from school;  $2\frac{1}{2}$  miles from churches; 3 miles from cheese factory. Population of Monterey 277, reached by hilly but good highway. General surface, rolling. Altitude, 1,400 feet. Acres in meadow, 75; in pasture, 25; in timber, 10, hard wood. Acres tillable, 75. Fruit, 15 apple trees. Best adapted to potatoes, berries, corn and buckwheat. Fences, fair. House, large. Large gambrel roof barn, good condition. House watered by well; barn, by creek. Unoccupied. Reason for selling, owner has other farm. Price, \$3,000. Terms, \$1,000 down. Address, Burt Moody, owner, Beaver Dams, N. Y., R. D. No. 3.

No. 1106.—Farm of 128 acres; located  $\frac{1}{2}$  mile from Monterey P. O.; 6 miles from railway station at Beaver Dams on line of N. Y. C. R. R.;  $\frac{1}{4}$  mile from school and churches. Nearest village, Watkins, population 2,817, reached by hilly highway, 12 miles distant. General surface, part hilly, mostly level. Altitude, 1,200 feet. Acres in meadow, 75; in pasture, 50. Acres tillable, 78. Best adapted to berries, beans, oats and buckwheat. Fences, fair. House, medium sized, fair condition. Two barns, fair condition. Reason for selling, to settle estate. Price, 1,200. Terms, cash. Address Lewis Kelly Estate, Monterey, N. Y.

No. 1107.—Farm of 105 acres; located 3 miles from Bradford P. O., R. D. 1; 13 miles from railway station at Savona on lines of Erie and D., L. & W. R. R.; 1 mile from school; 3 miles from churches. Population of Bradford 613, reached by highway. General surface, hilly. Altitude, 1,989 feet. Acres in meadow, 50; in pasture, 30; acres tillable, 30. House watered by well. Reason for selling, owner too far away to attend the same. Price on application. Address Fulliger Brothers, owners, Penn Yan, N. Y. Owners will rent with option to buy.

#### TOWN OF READING

Population 1,318

No. 1108.—Farm of 340 acres; located 2 miles from Watkins P. O., R. D. and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Milk collected at door. Highways, good. General surface, grade enough to drain nicely. Altitude, 800 feet. Nature of soil, loam and muck. Acres in meadow, 150; in pasture, 25;



FIG. 318.—HOUSE ON FARM NO. 1098, TOWN OF HECTOR,  
SCHUYLER COUNTY



FIG. 319.—HOUSE ON FARM NO. 1099, TOWN OF HECTOR,  
SCHUYLER COUNTY



in timber, 15, oak, basswood and walnut; acres tillable, 300. Fruit, 50 apple trees. Best adapted to general farm crops. Fences, mostly woven wire. House, 8 rooms, in good condition. Barn, basement, 36x100, 18-foot posts, gambrel roof. House watered by well, barn by

running water, fields by springs; 2 miles from Seneca Lake. Occupied by tenant; possession at any time. Reason for selling, ill health of owner. Price, \$65 per acre. Terms, half cash, balance on mortgage. Address J. F. Barnes, owner, Watkins, N. Y.

### SENECA COUNTY

Area, 346 square miles. Population, 26,972. Annual precipitation, 39.55 inches. Annual mean temperature, 49.1°. Number of farms, 2,085. County seat, Waterloo.

This county lies in the central part of the state between Seneca and Cayuga Lakes.

The greater part of the surface is undulating and elevated. In the northern part the surface is level with the fertile sandy loam found in all sections of the "great level." The surface rises toward the south in gentle rolls to an elevation of about 800 feet in the extreme southern part. In the central portion of the county is found a dark loam with clay subsoil, while in the southern part clay loam predominates. Gypsum and limestone are found in the county. The crop reports show corn: 334,218 bushels; potatoes, 290,310 bushels; oats, 649,066 bushels; wheat, 331,822 bushels; buckwheat, 117,492 bushels; barley, 55,574 bushels; dry beans, 23,589 bushels; hay and forage, 59,724 tons. The total value of all farm property is \$14,589,014, being an increase of 32 per cent. over 1900. Domestic animals reported: Dairy cows, 7,429; horses, 7,879; swine, 9,832; sheep, 15,304; poultry, 128,791; production of milk, 3,607,915 gallons valued at \$224,120.

The N. Y. C. & H. R. R. and two branches of the Lehigh Valley railroad intersect the county. In the northern part of the county an electric line passes through Seneca Falls. The Willard Insane Asylum with large and costly buildings is located at Ovid. Flour mills, malt houses and distilleries are located at Waterloo. The system of education is of the same high character demanded by the state and the needs of the rural sections are fully met by 91 district schools conveniently located. The county has 31 miles of state and county roads and 413 miles of improved highways. The agricultural organizations consist of one Pomona grange, 11 subordinate granges, county agricultural society and county beekeepers society. Seneca county is famed like many other of New York counties for the beauty of its scenery.

#### TOWN OF FAYETTE

Population 2,593

No. 1109.—Farm of 39 acres; located 2 miles from McDougall P. O. and railway station on line of Lehigh Valley Ry.; 1 mile from school; 2 miles from churches; 5 miles from milk station. Highways, level, in good condition. Nearest village, Waterloo, population 3,931, distance 5 miles, reached by rail and highway. General surface of farm, slightly rolling, mostly level. Altitude, 600 feet. Nature of soil, gravel, loam; all tillable. Fruit trees: 500 cherries, 250 pears, over 150 apples. Best adapted to fruit, poultry, wheat, oats, corn and alfalfa. Fenced for poultry. House, 8 rooms, in good condition. Outbuildings: barn, 30x40, with basement; 4 gasoline-heated brooder houses, 8x8; hen houses, 12x32 and 20x25. Watered: house, by well and cistern; barns, by well; 4 miles from Seneca Lake. Occu-

pied by owner. Price, \$5,500. Terms, \$2,000 first payment, balance on mortgage at 5%; \$1,000 personal property included in price. Poultry outfit accommodates 400 laying hens and 1,000 chicks. Address Edward Bannister, owner, R. D. 2, Waterloo, N. Y., or Geo. G. Goodelle, agent, 46 Linden street, Geneva, N. Y.

No. 1110.—Farm of 151 acres; located 3½ miles from Seneca Falls P. O. and railway station on line of N. Y. C. and L. V. Rys.; ½ mile from school; 3½ miles from churches; 3½ miles from butter factory. Highway, level, part macadam. Nearest village, Seneca Falls, population 6,588, reached by highway. General surface of farm, level. Altitude, 600 feet. Nature of soil, clay, loam and gravel. 10 acres of timber, maple, beech, etc., balance tillable: 3½ acres of winter apples. Best adapted to wheat, barley, oats, corn, alfalfa, hay

and beans. Fences, wire, in good condition. House, 10 rooms, in good condition; also large tenant house and barn, 20x30. Outbuildings: barns, 30x115; 30x40; 25x30; hog and hen houses, corn crib, well house, 12x12, and engine room. Watered: house, by well and cistern; barns and fields, by wells; Cayuga lake and Seneca river, also Barge canal, 3 miles distant. Occupied by owner. Price, \$75 per acre. Terms, \$3,000 first payment, balance on mortgage at 5%. Address Grover C. Brown, owner, Seneca Falls, N. Y., or Geo. G. Goodelle, agent, 46 Linden street, Geneva, N. Y.

## TOWN OF LODI

Population 1,408

No. 1111.—Farm of 55½ acres; located 3 miles from Lodi P. O.; 1½ miles from Lodi railway station on line of L. V. R. R.; 3 miles from school and churches. Nearest city, Geneva, population 12,446, 22 miles distant, reached by hilly highway or rail. General surface, level and hilly, 5 acres hilly and rough. Nature of soil, clay loam. Acres in pasture, 5; in timber, 5. Acres tillable, 50. Fruit, 400 sour cherry, 10 sweet cherry, 600 peach, 75 pear, 4 apple and 2 plum trees; 4 acres of Concord grapes. Best adapted to fruit, grains and hay. Fences, poor condition. House, 10 rooms, good condition. Barn, 34x36; horse barn, 20x32; small poultry house, all in fair condition. House and barns watered by well, fields by stream. Farm borders Seneca Lake for over ¼ mile. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,500. Terms, \$2,100 down, balance on mortgage at 5%. Address Harriet Simpson, owner, Seneca Falls, N. Y., or G. A. Burris Realty Co., 218 E. Water street, Elmira, N. Y.

## TOWN OF JUNIUS

Population 957

No. 1112.—Farm of 50 acres; located 3 miles from Waterloo P. O., R. D. 4, and railway station on line of N. Y. C. and L. V. Rys.; 1 mile from school; 1 mile from Methodist church. Highways, level, in good condition. Nearest village, Waterloo, population 3,931, reached by highway. General surface or farm, gentle slope. Altitude, 500 feet. Nature of soil, dark, gravelly loam. Acres in meadow, 25; all tillable. Fruit: a number of old apple trees and about 50 young trees not yet in bearing. Best adapted to hay, grain, potatoes, corn, cabbage and

fruits. House, 8 rooms, in good condition. Outbuildings: barn, 20x50; cow and horse shed; new hennery, 12x24; all in fair condition. House and barns watered by wells. Occupied by owner. Price, \$2,750. Terms, cash or \$1,000 can remain on mortgage. Address Geo. W. Rickon, owner, R. D. 4, Waterloo, N. Y. or E. W. Dowden, agent, Waterloo, N. Y.

No. 1112½.—Farm of 64 acres, located 5 miles from Lyons P. O., R. D.; ½ mile from railway station at Thomson on line of N. Y. C. R. R.; 1¼ miles from school; 2 miles from churches. Population of Lyons, 4,460, reached by rail or good level highway. General surface, slightly sloping to east and south. Altitude, 400 feet. Nature of soil, clay loam. Acres in pasture, 3; acres tillable, 61. Fruit, 112 winter apple, 150 young trees, 15 pear and 106 peach trees in bearing. Best adapted to potatoes, cabbage, corn, wheat, alfalfa, beans, etc. Fences, wire, in good condition. House, 8 rooms, hot water heating system, house in fine condition. Outbuildings: barn, 36x96; barn, 30x45, concrete floor, horse stable with concrete floor, hen house, 60x65, modern. House watered by well and cistern; barns and fields by springs. Occupied by owner. Price, \$6,500. Terms, \$3,000 cash, balance on mortgage at 5%. Address C. K. Vanderbilt, owner, Lyons, N. Y., or George G. Goodelle, broker, 46 Linden street, Geneva, N. Y.

No. 1113.—Farm of 36 acres; located 5 miles from Waterloo P. O., R. D. 5 and railway station on line of N. Y. C. and L. V. Rys.; 1 mile from school; 1½ miles from church. Highways, level. Nearest village, Waterloo, population 3,931, reached by highway. General surface of farm, sloping to east and west. Altitude, 500 feet. Nature of soil, dark, gravelly loam. Acres in meadow, 15; in pasture, 4; in timber, 4, maple, elm, etc.; tillable, 30. 5 acre apple orchard. Best adapted to general crops. Fences, wire and board, in fair condition. House, 6 rooms. Outbuildings: barn, 28x40, with basement, in fair condition. House and barn watered by wells. Occupied by tenant. Price, \$1,800. Terms, cash or half cash. Address Hugh Compson, owner, Lyons, N. Y., or E. W. Dowden, agent, Waterloo, N. Y.

No. 1114.—Farm of 76 acres; located 4 miles from Ovid P. O., R. D. 2; 2¼ miles from railway station at Haytes Corners on line of L. V. Ry.; ½ mile from school; 2½ miles from churches.

Highways, level. Nearest village, Seneca Falls, population 6,588, distance 12 miles, reached by rail and highway. General surface of farm, gentle slope east to Cayuga Lake. Altitude, 600 feet. Nature of soil, gravel loam. Acres in pasture, 15; in timber, 15; tillable, 46. Fruit, apples for family use; 2 acres of peaches. Best adapted to wheat, barley, oats, corn, alfalfa, beans, cabbage and hay. Fences, sheep fence around pasture and wood lot. House, 8 rooms, in fine condition. Outbuildings: 34x40, with basement. Watered: house, by well and cistern; barns, by well and running stream; fields, by stream; Cayuga Lake borders on farm. Occupied by owner. Reason for selling, desires larger farm. Price, \$3,500. Terms, \$1,500 first payment, balance mortgage at 5%. Beautiful lake view from farm. Address Joseph Moraski, owner, R. D., Ovid, N. Y.; or Geo. G. Goodelle, agent 46 Linden street, Geneva, N. Y.

TOWN OF SENECA FALLS

Population 7,407

No. 1115.—Farm of 160 acres; 2 miles from Seneca Falls P. O. and railway station; 2 miles from school, 7 churches and milk station. Highways, good; new State road to be built. Nearest large village, Seneca Falls, population 6,588, 2 miles distant, reached by highway. Surface of farm, level, slightly rolling. Soil, sandy loam. Acres in meadow, 60; in natural pasture, 10; in timber, 18, elm, maple and ash, very little large timber; acres tillable, 135. Fruit, 40 apple and 5 pear trees. Best adapted to all kinds of grain and hay. Fences, about 440 rods of smooth wire, balance, barbed wire, in good condition. House, old-fashioned farm house, 14 rooms, used for two families. Barn, 40x40; cow barn, 18x40; farm shop; foundation built for barn, 36x64. Watered, house and barn, by well; fields, by springs and brook; 3 miles from Cayuga Lake; 2 miles from Seneca river. A good dairy farm. Sand and gravel bank on farm. Occupied by tenant. Reason for selling, owner wishes to move to city. Price, \$60 per acre. Terms, \$1,000 down. Address Lillian R. Arnold, owner, 43 Clinton street, Seneca Falls, N. Y. Owner will rent.

TOWN OF TYRE

Population 900

No. 1116.—Farm of 40 acres; located 4½ miles from Seneca Falls P. O., R. D.

1 and railway station on line of N. Y. C. and L. V. Rys.; ½ mile from school; ½ mile from church. Highways, level. Nearest village, Waterloo, population 3,931, reached by highway. General surface of farm, rolling. Altitude, 500 feet. Nature of soil, dark, gravelly loam. Acres in meadow, 15; in timber, 10, mostly second growth hickory, maple, etc.; acres tillable, 30. Fruit; 20 apples, pears and cherries, in bearing; 50 apples and pears set 6 years. Best adapted to general crops; also excellent for fruit. Fences, wire, in good condition. House, 6 rooms, in good condition. Barn, 28x38, with basement, in good condition. House and barn watered by wells. Occupied by owner. Price, \$2,800. Terms, \$1,100 down, balance on mortgage. Address Harry Weaver, owner, R. D. No. 1, Seneca Falls, N. Y., or E. W. Dowden, agent, Waterloo, N. Y.

TOWN OF VARICK

Population 1,173

No. 1117.—Farm of 90 acres; located 2½ miles from Romulus P. O., R. D.; 1½ miles from railway station at Kendaia on line of L. V. R. R.; 1 mile from school; 2½ miles from churches. Romulus reached by level highway. General surface, level, well drained with tile. Altitude, 600 feet. Nature of soil, clay loam. Acres tillable, all. Fruit, 100 bearing apple trees; 1 acre of peaches; 450 pear trees. Best adapted to hay, grain, fruit and alfalfa. Fences, wire, fair condition. House, 7 rooms, newly painted, furnace heat, good condition. Outbuildings: barn, 34x50, with 16 stanchions; horse barn, 24x50, with 6 stalls; hog house, 16x18; poultry house, 16x60; wagon house, 16x30. House watered by well, 1,300 feet frontage on Seneca Lake. Occupied by owner part of time. Price, \$12,000. Terms, \$8,000 cash, balance on mortgage at 5%. Address, A. DeMattia, owner, 415 Milton avenue, Solvay, N. Y., or George G. Goodelle, broker, 46 Linden street, Geneva, N. Y.

TOWN OF WATERLOO

Population 4,429

No. 1118.—Farm of 167 acres; located 1 mile from Waterloo P. O., R. D. 3, and railway station on line of N. Y. C. & R. R.; 1 mile from school, Catholic and Protestant churches. Highways in good condition. Surface of farm, slightly rolling. Altitude, about 400 feet. Soil,

sandy and sandy loam. Acres in meadow, 30; in natural pasture, 20; in timber, 10, little value. Acres tillable, 150. Fruit, old apple orchard of about 15 trees, young apple orchard of about 40 trees. Best adapted to vegetables, oats, rye, corn, etc. Fences, mostly wire, some new, some old. House, 8 rooms, furnace and gas, good condition. Outbuildings: horse and grain barn, 32x60; cow shed, 24x40; tool shed, 20x48; hen-nery, 10x24, good condition. Watered by well and creek. Seneca river a few rods from farm. Occupied by tenant. Reason for selling, owner a widow. Price, \$70 per acre. Terms, cash or part cash. Address Mrs. Stella Harris, owner, Interlaken, N. Y., or E. W. Dowden, agent, Waterloo, N. Y.

No. 1119.—Farm of 114 acres, located 2 miles from Waterloo P. O., R. D. 4, and railway station on line of N. Y. C. and L. V. railways; 2 miles from school, Catholic and Protestant churches. Highways in good condition. Surface of farm, gently sloping. Altitude, 450 feet. Soil, loam and sandy loam. Acres in meadow, 20; in natural pasture, 10; in timber, 15, chestnut, maple, etc. Acres tillable, 90. Fruit, apples, peaches and pears. Adapted to any crops grown in this climate. Fences, mostly wire, good condition. Brick house, 11 rooms, excellent condition. Outbuildings: grain barn, 30x40; hay barn, 30x40; horse barn, 20x34, new; cow shed, 20x40; hog and hen house, 18x36; new tool shed, 20x60. Watered by well and spring. Occupied by owner. Reason for selling, owner has another farm. Price, \$90 per acre. Terms, cash or part cash. Address Nathan Van Namee, owner, R. D. 4, Waterloo, N. Y., or E. W. Dowden, agent, Waterloo, N. Y.

No. 1120.—Farm of 164 acres; located 2½ miles from Waterloo P. O., R. D. 5, and railway station on line of N. Y. C. R. R.; 2 miles from school; 2½ miles from Catholic and Protestant churches. Highways, good. Surface of farm slightly sloping. Altitude, 450 feet. Soil, dark loam and black muck. Acres in meadow, 80; in timber, 25, maple and elm. Acres tillable, 130. Fruit, apples and pears. Adapted to all crops grown in this climate. Fences, mostly wire,

part good and part in fair condition. House, 10 rooms, good condition. Outbuildings: grain and hay barn, 35x60, new; also sheep barn, hog house, hen house, cow shed, horse barn and carriage house. Watered by well. Occupied by tenant. Price, \$12,000. Terms, mostly cash. Address Miss Susie E. Dowden, owner, Waterloo, N. Y., or E. W. Dowden, agent, Waterloo, N. Y.

No. 1121.—Farm of 30 acres, located 1½ miles from Waterloo P. O., R. D. No. 3, and railway station on line of N. Y. C. and L. V. R. Rs.; 1 mile from school; 1½ miles from churches. Highways, level. General surface of farm, sloping. Altitude, 460 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 10. Acres tillable, all. Fruit, 40 bearing apple trees, 100 young peach not yet bearing. Best adapted to potatoes, corn, etc. Fences, wire, fair condition. House, 7 rooms, good condition. Outbuildings: frame barn, 30x40; tool shed, hen-nery, cow barn, fair condition. House watered by well; barns by well; fields by spring. Seneca river, 1 mile distant. Occupied by owner. Reason for selling, wishes to retire. Price, \$3,500. Terms, \$2,100 cash, balance on mortgage. Address John Letts, owner, R. D. No. 3, Waterloo, N. Y., or E. W. Dowden, broker, Waterloo, N. Y.

No. 1122.—Farm of 106 acres, located 3 miles from Waterloo P. O., R. D. No. 5, and railway station on line of N. Y. C. and L. V. R. Rs.; 1 mile from school; 1 mile from Methodist church. Highways, level. General surface of farm, part sloping and part level. Altitude, 490 feet. Nature of soil, gravel, loam and muck. Acres in timber, 20, elm and soft maple, second growth. Acres tillable, 80. Fruit, 20 bearing apple trees. Best adapted to general farming. Fences, wire, part good and part in poor condition. House, frame, 7 rooms, good condition. Basement barn, 40x60, with gambrel roof, good condition. House watered by well; barns by wells; fields by creek. Occupied by tenant. Reason for selling, owner has another farm. Price, \$5,000. Terms, \$1,000 cash, balance on mortgage. Address George B. Cottrell, owner, R. D. No. 4, Waterloo, N. Y., or E. W. Dowden, broker, Waterloo, N. Y.

STEUBEN COUNTY

Area, 1,490 square miles. Population, 83,363. Annual precipitation, 34.97 inches. Annual mean temperature, 49.1°. Number of farms, 7,363. County seat, Bath.

This county is situated in the southwestern part of the state bordering on Pennsylvania. It is drained by the Canisteo, Conhocton and Tioga Rivers, which unite in the southeastern part of the county and form the Chemung River. Cayuga Lake forms part of its northeast boundary.

The surface is an undulating table land diversified with broad irregular hills and deep valleys. A chain of low hills extends on both sides of the valleys of the Conhocton and Canisteo Rivers and extends across the county from the northeast to the southwest. Between these elevations is a wide fertile valley. The soil on the uplands is a deep gravelly loam, while clay loam is found in the valleys and in the eastern half of the county with a subsoil of clay and lime. In the southeast corner a black loam soil is found in the valleys. Woodlands of oak, ash, pine, sugar maple, beech, chestnut and other trees cover nearly one-third of the entire area. Excellent building stone is found in the Devonian sandstone outcroppings. The county ranks first in the production of honey, second in buckwheat and fourth in sugar. Some of the principal crops are corn, 228,411 bushels; oats, 1,216,138 bushels; wheat, 168,160 bushels; buckwheat, 341,264 bushels; rye, 71,102 bushels; potatoes, 3,279,953 bushels; hay and forage, 189,482 tons. The value of all farm property is \$37,369,643, an increase of 14 per cent. since 1900. The general advance in price of New York State farms is just beginning to reach this county and the next ten years will undoubtedly mark a very decided increase. Domestic animals are reported as: dairy cows, 37,559; horses, 20,506; swine, 17,740; sheep, 53,161; poultry, 296,172; production of milk, 16,430,763 gallons; this included with the products of 42 milk stations and factories in the county sold for \$1,325,568.

There are 45 miles of state and county roads and 2,862 miles of graded and improved roads, and 369 district schools with many standard high schools provide the means of education for the farmers' children. Several trunk lines intersect the county making the transportation facilities excellent and ample. The New York State Soldiers Home is located at Bath. Corning, known as the Crystal City, is the site of extensive glass works. Hornell is a leading railroad town where many important manufactories are located. There are 38 agricultural societies in the county serving the best interests of the farmer.

TOWN OF BATH

Population 8,554

No. 1123.—Farm of 41½ acres; 3¼ miles from Bath P. O. and railway station; 4½ miles from Savona railway station; ¾ mile from school. Soil, yellow loam and gravel. Acres in meadow, 29; acres in pasture, 7; acres in timber, 5½. House, 12x16, with wing, 8x12, not in very good condition. Barn and addition, 20x30, with shed and stable. Watered by spring and cistern. Timber land comprises a fine, thrifty grove of young white or cork pine; also from 5,000 to 8,000 feet of large sawing pine. Fences, pole and rail, in poor condition. Price, \$850. Terms, ¼ down, balance to suit purchaser. Owner will rent with option to buy. Name and address of owner, John H. Bowlby, Bath, N. Y.

No. 1124.—Farm of 150 acres; located 2¼ miles from Bath P. O., R. D. 1, and

railway station on line of D., L. & W. and Erie Railways; 1/20 of mile from school; 2 miles from milk station, Catholic and Protestant churches; 3½ miles from butter factory; 4 miles from cheese factory. Highways, State road. Surface of farm, level. Altitude, 1,000 feet. Soil, loam, gravel and muck. Acres in meadow, 50; in natural pasture, 40; in timber, 7, hemlock, pine, chestnut, etc. Acres tillable, 90. Fruit, apples. Best adapted to wheat, rye, oats, barley, corn, tobacco and garden crops. House, 20x26, with wing, 18x24, and wing, 10x12, concrete porch, new; also tenant house. Outbuildings, barn, 30x62; barn, 20x44; barn, 14x20; silo, concrete stable, 26x34, new; barn, 38x70. Watered by well, windmill and two trout streams. Occupied by tenant. Reason for selling, owner in other business and cannot attend to farm. Price, \$13,750. Terms, ¼ cash, balance to suit purchaser. Address Mrs. Helene Bowlby, owner, Bath, N. Y.

## TOWN OF BRADFORD

Population 613

No. 1125.—Farm of 160 acres; located  $\frac{1}{4}$  mile from Bradford P. O., R. D. No. 1; 9 miles from railway station at Savona on line of D., L. & W. and Erie R. Rs.;  $\frac{1}{4}$  mile from school and Protestant churches; 9 miles from butter factory;  $2\frac{1}{2}$  miles from cheese factory. Highways, good. State road expected next year. Surface of farm, level. Soil, gravel and muck. Acres in meadow, 60; in natural pasture, 25; in timber, 30. Acres tillable, 125. Fruit, apples. Best adapted to corn, wheat, rye, oats and buckwheat. Fences, stump. House, 18 rooms, good condition. Outbuildings in fair condition. Watered by well and springs. Reason for selling, to close an estate. Price, \$6,000. Terms, cash. Address, Anna M. Zimmerman, owner, Bradford, N. Y.

No. 1126.—Farm of 220 acres; located 3 miles from Bradford P. O., R. D. No. 1; 5 miles from railway stations at Savona on line of Erie R. R. or Hammondsport on line of D., L. & W. R. R.;  $\frac{3}{4}$  mile from school and churches;  $\frac{1}{2}$  mile from cheese factory; 5 miles from butter factory and milk station. General surface of farm, level. Nature of soil, gravel and muck. Acres in meadow, 75; in pasture, 30; in timber, 30, pine, hemlock and oak. Acres tillable, 125. Fruit, 25 apple and other trees. Best adapted to corn, wheat, oats, buckwheat and hay. Fences, wire, fair condition. House, 14 rooms, good condition. Outbuildings: barn, 42x42; hay barn, 40x24; wagon house, 30x36; tool house, 20x40; hog house, 18x20. House and barns watered by well; fields, by springs. Occupied by tenant. Leased for 1 year. Reason for selling, ill health of owner. Price, \$3,000. Terms, \$2,500 down, balance to suit purchaser. Address E. B. Longwell, owner, Bradford, N. Y.

No. 1127.—Farm of 97 acres; located  $\frac{1}{4}$  mile from Bradford P. O., R. D. No. 2;  $7\frac{1}{2}$  miles from Hammondsport on line of Erie R. R.;  $\frac{1}{4}$  mile from school and churches; 2 miles from cheese factory;  $\frac{1}{4}$  mile from milk station. Nearest large village, Bath, population 3,884, 12 miles distant, reached by rail or highway. General surface, rolling and level. Altitude, 1000 feet. Nature of soil, clay loam. Acres in meadow, 51; in pasture, 3; in timber, 9, pine, oak, ash and maple. Acres tillable, 80 to 85. Fruit, 4 acres, 15-year-old apples, 150

trees, small fruit for home use. Best adapted to general farm crops. Fences, rail and wire. House, 8 rooms and wood shed, good condition. Outbuildings: barn, 30x60; wagon barn, 30x36, both with basement; corn house, 16x20; separator house, 6x8; small poultry house, all in fair condition. House watered by running water and well; barns, by running water; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms, half cash, balance to suit purchaser. Address E. Curtis Switzer, owner, Bradford, N. Y.

## TOWN OF CAMPBELL

Population 1,204

No. 1128.—Farm of 80 acres; 3 miles from Campbell P. O., and railway station on line of Erie and D., L. & W. R. Rs.; 3 miles from school, churches and butter factory. Highways, hilly. Nearest city, Corning, population 13,730, 10 miles distant. Surface, rolling. Soil, gravelly. Acres in meadow, 40; some timber, pine and chestnut. Fruit, apples. Best adapted to corn, potatoes, oats and buckwheat. Fences, poor. No house. Fair-sized barn. Watered by well. Reason for selling, to close estate. Price, \$1,000. Terms, \$200 down, balance \$150 each year. Owner will rent on shares or for 1 year with option to buy. Address Estate of Geo. R. Sutherland, Campbell, N. Y.

## TOWN OF CANISTEO

Population 3,441

No. 1129.—Farm of 109 acres; located 1 mile from P. O., 4 miles from railway station at Cameron on line of Erie Ry.;  $\frac{3}{4}$  mile from school; 1 mile from church. Highways, somewhat hilly, but good. Nearest city, Hornell, population 13,617, 13 miles distant, reached by rail and highway. Surface of farm, level and sloping. Acres in meadow, 10. No buildings. Price, \$7 per acre. Terms,  $\frac{1}{2}$  down but prefer cash. Address M. E. Brady, owner, Elmira, N. Y., or R. D. No. 2. Owner will rent.

## TOWN OF CATON

Population 1,078

No. 1130.—Farm of 100 acres; located 5 miles from Big Flats P. O., Pine City R. D. 2, and railway station on lines of Erie and D., L. & W. R. Rs.;  $1\frac{1}{2}$  miles from school; 3 miles from churches; 3 miles from butter factory, cheese factory

and 5 miles from milk station. Highways, rather hilly, but good. Nearest city, Elmira, population 37,176, 9 miles distant, reached by rail or highway. Surface of farm, all rolling; all machine worked except a few acres. Soil, clay loam. Acres in meadow, 35 to 40; in timber, 4; acres tillable, 95. Fruit, apples, pears, plums, cherries and grapes. Best adapted to potatoes, oats, buckwheat, rye and corn. Fences, mostly wire. Ten-room house, in good condition. Two barns, tool house, hog house and hen house. House is watered by well; barn, by spring; fields, by springs. Occupied by owner. Price, \$3,200. Terms, cash. Address John and Anna Hartman, owners, R. D. No. 2, Pine City, N. Y., or G. A. Burris Realty Co., agents, 218 East Water street, Elmira, N. Y.

## TOWN OF HORNBY

Population 870

No. 1131.— Farm of 28 acres; 5 miles from Beaver Dams P. O., R. D. 3; and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school and church; 7 miles from butter factory; 40 rods from cheese factory. Highways, good. Nearest city, Corning, population 13,730, 7 miles distant, reached by highway. Altitude, 1,550 feet. Soil, clay subsoil. Acres in meadow, 8; in natural pasture, 14; in timber, 6, maple, ash and hemlock; acres tillable, 15. Fruit, apples and pears. Best adapted to hay and grain. Fences, rail, wire and board. House, 12 rooms, fair condition. Barn, 26x24, fair condition. Watered, house, by well; barn and fields, by spring. This farm is located 3 miles from Hornby Lake. Occupied by owner. Reason for selling, owner has more land than he can attend to. This would make a fine poultry farm and keep a horse and 2 cows. Price, \$1,000. Terms, \$500 down, balance on easy terms. Address E. J. Easterbrook, owner, Beaver Dams, N. Y., R. D. 3.

No. 1132.— Farm of 160 acres; located 6 miles from Corning P. O., R. D. 5; 1 mile from railway station at Ferenbaugh on line of N. Y. C. & H. Ry.;  $\frac{1}{2}$  mile from school; 6 miles from churches. Highways, good. Surface of farm,  $\frac{1}{2}$  level, remainder somewhat hilly. Soil, gravel and loam. Acres in meadow, 40; in natural pasture, 20. Acres tillable, 130. Fruit, apples, plums and pears. Best adapted to corn, wheat, oats, buckwheat, potatoes, etc. Fences,

stump, stone and woven wire. House, large, fair condition. Outbuildings: grain barn, 32x80, basement; straw shed and cow stable, 24x40; wagon house, 22x35; hen house, etc. Watered, house and barn, by water piped from spring; fields, by creek. Reason for selling, to close an estate. Price, \$4,500. Terms, \$3,000 cash, balance on mortgage at 6%. Address Samuel Oldfield, owner, 73 Sterling street, Corning, N. Y.

## TOWN OF HOWARD

Population 1,461

No. 1133.— Farm of 185 acres; located 1 mile from Howard P. O., R. D. 3; Hornell, 1 mile from school; 1 mile from Presbyterian and Baptist churches; 7 miles from butter factory; 1 mile from cheese factory; 7 miles from milk station. Highway, in good condition. Nearest city, Hornell, population 13,617, distant 7 miles, reached by highway. General surface of farm, rolling and level. Altitude, 1,400 feet. Nature of soil, sandy and loam. Acres in meadow, 40; in pasture, 10; in timber, 35, ash, hemlock and maple. Acres tillable, 100. Fruit, apples, pears and plums. Best adapted to potatoes, oats and barley. Fences, mostly wire. House, 32x28; wing, 28x24, in good condition. Barn, 50x70, with basement. Hen house. Watered, house, by well; barns, by running water; fields, by springs. Occupied by tenant. Reason for selling, poor health. Price, \$9,000; terms, easy. Address D. V. Sutfin, owner, Hornell, N. Y., R. F. D. 4. Owner will rent.

## TOWN OF JASPER

Population 1,264

No. 1134.— Farm of 123 acres; located  $\frac{1}{2}$  mile from Jasper P. O., R. D. No. 2; 8 miles from railway station at Cameron on line of Erie R. R.;  $\frac{1}{2}$  mile from school and churches;  $\frac{1}{2}$  mile from butter factory; 1 mile from cheese factory. Nearest village, Canisteo, population 2,250, 12 miles distant, reached by State highway. General surface, rolling. Nature of soil, gravel and loam. Acres in meadow, 50; in pasture, 30; in timber, 7, mostly hard wood; acres tillable, 90. Best adapted to hay, wheat and oats. Fences, wire and rail, in good condition. House, 20x36, with wing, 14x26; woodshed, 14x14; 12 rooms. Outbuildings: gambrel roofed barn with basement, 36x50, with cow barn attached, 16x80; straw shed, 26x40; horse barn, 24x32;

hog house, 16x35; poultry house, 14x16; silo in barn. House watered by drilled well; barns, by running water; fields, by creek and springs. Occupied by owner. Reason for selling, unable to work same. Price, \$35 per acre. Terms, small payment down, balance easy. Address Isaac S. White, owner, Jasper, N. Y.

## TOWN OF LINDLEY

Population 1,153

No. 1135.— Farm of 226 acres; located 2 miles from Lindley P. O., R. D. 2; 2½ miles from railway station at Lindley on line of N. Y. C. Ry.; ¾ mile from school; 1¼ miles from M. E. church; 2 miles from cheese factory; 2½ miles from milk station. Highways in fair condition. Nearest city, Corning, population 13,730, 13 miles distant, reached by rail and highway. Surface of farm, some hilly and some level. Altitude, 1,224 feet. Soil, clay and sandy loam. Acres in meadow, 60; in natural pasture, 60; in timber, 40, pine and oak. Acres tillable, 150. Fruit, 14 apple and 3 pear trees. Best adapted to hay, potatoes and spring grain. Fences, wire and stump, good. House, 12 rooms, first-class condition. Barn, 32x72, first-class condition. Watered, house, by well; barn and fields, by running water. Occupied by owner. Reason for selling, to close an estate. Price, \$4,500. Terms, \$3,000 cash. Address J. J. Driscoll, owner, Lindley, N. Y. Owner will rent.

No. 1136.— Farm of 307 acres; located ½ mile from Lindley P. O., R. D. No. 2, and railway station on line of N. Y. C. R. R.; ½ mile from school and churches; ½ mile from cheese factory; 2 miles from milk station and condensing plant. Nearest city, Corning, population 13,730, 12 miles distant, reached by rail or good highway. General surface of farm, 70 acres of good river flats, remainder, rolling. Altitude, 1,029 feet. Nature of soil, sandy loam. Acres in meadow, 45; in pasture, 200; in timber, 60, oak and pine, estimated at 200,000 feet. Acres tillable, 150. Fruit, 10 apple trees. Best adapted to tobacco, alfalfa, hay, corn, oats, potatoes and wheat. Fences, wire and board, in good condition. House, 12 rooms, fair condition. Outbuildings: 2 basement barns, 36x48; 2 tobacco sheds, 28x64; 1 horse barn, 32x32; 1 cow barn, 28x80; 1 corn crib, 24x32. House and barns watered by running water; fields, by creeks. Occu-

pied by owner. Reason for selling, ill health. Price, \$10,000. Terms, \$2,000 cash, balance to suit purchaser. Address Alexander Brown, owner, Lindley, N. Y. Owner will rent on shares or with option to buy.

No. 1137.— Farm of 226 acres; located 2 miles from Lindley P. O., R. D. No. 2; 2½ miles from railway station on line of N. Y. C. R. R.; ¾ mile from school; 1¼ miles from M. E. church; 2 miles from cheese factory; 3 miles from milk station and condensing plant. Highways, good dirt road. Nearest city, Corning, population 13,730, 13 miles distant, reached by rail and highway. General surface, rolling and level. Altitude, 1,220 feet. Nature of soil, clay and loam. Acres in meadow, 60; in natural pasture, 60; in timber, 40, oak and pine. Acres tillable, 150. Fruit, 14 apple and 3 pear trees. Best adapted to hay, potatoes, oats and corn. Fences, wire, in fair condition. House, 12-rooms, 2 stories, in good condition. Basement barn with gambrel roof, 32x72. House and barns watered by running water; fields, by springs. Tioga river, 2 miles distant. Occupied by owner. Reason for selling, to settle an estate. Price, \$4,000. Terms, \$2,000 cash, balance on mortgage. Address Jeremiah Driscoll, administrator, Lindley, N. Y. Owner will rent.

No. 1138.— Farm of 400 acres, located ¼ mile from Lawrenceville, Pa., P. O., R. D. No. 1, and 1 mile from railway station on line of N. Y. C. R. R.; ¼ mile from school; ¼ mile from churches; 30 rods from cheese factory; 1 mile from milk station, and 1 mile from condensing plant. Highways, good dirt road, level. General surface, 200 acres river flats, balance rolling. Altitude, 910 feet. Nature of soil, loam. Acres in meadow, 100; in natural pasture, 125; in timber, 75, oak. Acres tillable, 250. Fruit, 30 apple and 6 plum trees. Best adapted to wheat, tobacco, hay, corn, oats, potatoes and dairying. Fences, wire and board, in good condition. House, 10 rooms, in excellent condition. Outbuildings: 2 basement barns, 36x48, painted, in good condition; 2 tobacco sheds, one 32x248 and one 32x148. House watered by running water, barns by running water and fields by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$20,000. Terms, small payment down, balance on long time mortgage. Address, Wm. E. Davis, owner, Lawrenceville, Pa.

## TOWN OF TROUPSBURG

Population 1,712

No. 1139.—Farm of 115 acres; located on R. F. D.; 9 miles from railway station at Knoxville on line of N. Y. C. R. R.; 1 mile from school, Protestant churches and cheese factory; 8 miles from butter factory and milk station. Highways, good. Nearest village, Troupsburg, reached by highway. Surface of farm, mostly side hill. Good soil. Acres in meadow, 50; in natural pasture, 40; in timber, 20, hard wood. Acres tillable, 90. Fruit, pears, plums, apples and cherries. Best adapted to hay, oats, barley, buckwheat, etc. Fences, barbed wire. House, 12 rooms, fair condition. Outbuildings: barn, 42x50; granary, 12x20. Watered by well and creek. Occupied by owner. Reason for selling, advanced age of owner. Price, \$40 per acre. Terms, small payment down, balance on time. Address C. Wilkinson, owner, Knoxville, Pa. Owner will rent.

## TOWN OF URBANA

Population 2,659

No. 1140.—Farm of 102 acres; 4 miles from Hammondsport P. O. and railway station on line of B. & H. R. R.; R. D. 4 from Hammondsport. Highways, good. Soil, mostly gravelly loam, clay subsoil. Acres in meadow, 40; tillable, 90; natural pasture, 20; timber, 8, maple, oak and chestnut, second growth. Fruit, 60 apple trees, some plums and cherries. Adapted to oats, corn, barley and buckwheat. Fences, wire and rail, in fair condition. Large house, in good condition. Barns: grain barn, 30x40, sheds attached; wagon house, 26x36; tool house, 20x24; hog and poultry house. Watered, house, by well and cistern; barn, by well; fields, by springs. Reason for selling, owner engaged in other business. Price, \$3,000. Terms, 1/2 down, balance on time. Address Fred W. Locke, owner, Hammondsport, N. Y. Owner will rent with option to buy.

## SUFFOLK COUNTY

Area, 720 square miles. Population, 96,136. Annual precipitation, 60.2 inches. Annual mean temperature, 51.3°. Number of farms, 2,491. County seat, Riverhead.

This comprises the middle and eastern part of Long Island and is the extreme southeastern county of New York State. The waters of Long Island Sound border its north shore with the Atlantic Ocean on its southern side. The coast is deeply indented by inlets and bays, which afford good harbors.

The surface along the south shore is very flat and only about fifty feet above sea level. Extending across the county north and south from Smithtown Bay to Great South Bay is a level valley averaging about four miles wide. These level tracts all have fertile sandy loam soil. The northeastern portion rises in gentle slopes to about 300 feet above sea level and the soil is a clay and gravelly loam. From Smithtown Bay east along the north shore is a ridge of hills extending to the extreme end of the county, while to the south it is parallel by a low broad upland, the soil being gravelly loam. Between these ridges is an interval of level land, with fertile sandy loam. The surface is extensively covered with forests. There is, however, very little commercial timber to be found.

The leading crops are corn, 743,721 bushels; oats, 61,257 bushels; wheat, 87,812 bushels; rye, 29,702 bushels; potatoes, 2,200,187 bushels; hay and forage, 22,011 tons. Because of the short distance from this county to New York City much of the land is planted in garden truck and hundreds of farmers are engaged in this particular kind of farming. Along the south shore are found large duck and poultry farms, several of which market more than 100,000 ducks annually. Cranberries are also very extensively grown. The value of all farm property is \$33,537,021, an increase of 41.6 per cent. The average price of improved land is \$172.50, showing a gain of \$68.15 per acre over that shown by the census of 1900. This rise in value is largely caused by its proximity to New York City and by the rapid development of the poultry and vegetable business. Dairy cows reported, 5,996; horses, 6,347; swine, 9,945; sheep, 3,347; poultry, 305,844; production of milk, 2,794,136 gallons, total value of the same being \$276,676. The county contains 129 district schools, has 57 miles of state and county roads and 1,462 miles of other improved highway. It is intersected by the Long Island and South Side railroads and electric lines in the extreme western part. The agricultural organizations comprise 3 granges, the Long

Island potato exchange, farmers' agricultural association, a county agricultural society, a farmers' club and the Huntington Horticultural and Agricultural Society.

#### TOWN OF BROOKHAVEN

Population 16,737

No. 1141.—Farm of 14 acres; located  $\frac{1}{8}$  mile from East Setauket P. O.;  $\frac{3}{8}$  mile from railway station at Setauket on line of L. I. R. R.;  $\frac{1}{16}$  mile from school;  $\frac{1}{8}$  mile from churches;  $\frac{3}{8}$  mile from milk station. Highways, gravel. Nearest village, Port Jefferson,  $1\frac{1}{4}$  miles distant, reached by rail and highway. Surface of farm, rolling. Soil, loam. Acres in natural pasture, 2; 1 acre asparagus; in timber, 1, locust, hickory, etc. Acres tillable, 10. Fruit, 300 peach trees, apples, pears, etc. Best adapted to truck farming, flowers or poultry. Fences, wire, good. Two houses, 1 of 6 rooms, completely furnished, and 1 of 9 rooms, good condition. Outbuildings: barn, 20x30; poultry house, 15x50; corn crib, etc., all in good condition. Watered by springs; enough for irrigation. This farm is  $1\frac{1}{2}$  miles from Long Island Sound;  $\frac{1}{4}$  mile from Port Jefferson Bay; good bathing. Occupied by owner. Price, \$8,500, includes farm implements, horse, wagons, etc. Terms, \$2,000 cash. Address C. W. Ryder, owner, East Setauket, L. I., N. Y.

#### TOWN OF ISLIP

Population 18,346

No. 1142.—Farm of 24 acres; located 1 mile from Central Islip P. O. and railway station on line of Long Island R. R. Islip, 5 miles distant, reached by good highway. General surface of farm, level. Acres in meadow, 7; in timber, 13, pine and oak. Acres tillable, 11. Fruit, apples, pears, cherries and grapes. Best adapted to vegetables and fruit. House, 7 rooms, fair condition. Barn, poultry house and cow shed, in fair condition. House and barn watered by cistern. Occupied by tenant. Reasons for selling, owner a widow. Price, \$4,500. Terms, part cash, balance on mortgage. Address Mrs. J. Adams, owner, Central Islip, N. Y., or Robert E. O'Donohue, broker, Central Islip, N. Y. Owner will rent.

No. 1143.—Farm of  $10\frac{1}{2}$  acres; located  $\frac{1}{2}$  mile from Central Islip P. O. and railway station, on line of Long Island R. R.;  $\frac{1}{2}$  mile from school and churches. Islip, 5 miles distant, reached by good highway. General surface, level. Acres in meadow,  $7\frac{1}{2}$ . Fruit, apples.

Best adapted to grain and vegetables. House, frame, 7 rooms, good condition. Barn and poultry house, in good condition. House and barns watered by well. Occupied by tenant. Reason for selling, owner in other business. Price, \$2,500. Terms, \$500 cash, balance on mortgage. Address Thomas Cordingley, owner, Central Islip, N. Y., or Robert E. O'Donohue, broker, Central Islip, N. Y. Owner will rent.

No. 1144.—Farm of 19 acres; located 1 mile from Islip P. O. and railway station on line of Long Island R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches. Islip, 5 miles distant, reached by good highway. General surface of farm, level. Acres in meadow, 10; in timber, 9, oak and pine. Acres tillable, 10. Fruit, apples, pears and peaches. House, 5 rooms, frame, fair condition. Barn and poultry house, poor condition. House and barn watered by cistern. Occupied by tenant. Reason for selling, owner a widow. Price, \$3,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Mrs. John Smith, owner, Central Islip, N. Y., or Robert E. O'Donohue, broker, Central Islip, N. Y. Owner will rent.

No. 1145.—Farm of 65 acres; located  $\frac{1}{4}$  mile from Central Islip P. O. and railway station on line of Long Island R. R.  $\frac{1}{4}$  mile from school and churches. Islip, 5 miles distant, reached by good highway. General surface, level. Nature of soil, loam. Acres in meadow, 45; in timber, 10, pine and oak. Acres tillable, 45. Fruit, apples, pears, plums and peaches. Best adapted to fruit, vegetables and grains. Fences, good, wire. House, 14 rooms; tenant house, 8 rooms, all in good condition. Outbuildings: 1 new large barn, 2 other barns, poultry house, etc. House watered by windmill and cistern; barns, by windmill. Occupied by tenants. Reason for selling, advanced age of owner. Price, \$22,000. Terms, \$10,000 cash, balance on mortgage. Address Mrs. Katherine J. Hilliard, owner, Central Islip, N. Y., or Robert E. O'Donohue, broker, Central Islip, N. Y. Owner will rent.

No. 1146.—Farm of 11 acres; located  $\frac{1}{4}$  mile from Central Islip P. O. and railway station on line of Long Island R. R.;  $\frac{1}{4}$  mile from school and churches. Islip, 5 miles distant, reached by good highway. General surface of farm, level. Acres in meadow, 10. Fruit, apples.

pears and peaches. Best adapted to grain and vegetables. Fences, wire. House, frame, 16 rooms, fair condition. Outbuildings: large barn, horse stables, carriage house and poultry house, all in fair condition. Occupied by owner. Reason for selling, advanced age. Price, \$6,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Mrs. Caroline Lucas, owner, Central Islip, N. Y., or Robert E. O'Donohue, broker, Central Islip, N. Y. Will rent with option to buy.

No. 1147.—Farm of 22 acres; located 3 miles from Central Islip P. O., R. D., and railway station on line of Long Island R. R.;  $1\frac{1}{4}$  miles from school;  $1\frac{1}{2}$  miles from churches. Islip, 8 miles distant, reached by good highway. General surface of farm, level. Acres in meadow, 22. Acres tillable, 22. Fruit, apples, pears, peaches, plums and grapes. Best adapted to grain, vegetables and fruit. Fences, rail and wire. House, 6 rooms, good condition. Outbuildings: new hay barn, cow and horse barn, fair condition. Saw mill and cider press in working condition. House and barns watered by wells. Occupied by owner. Price, \$6,500. Terms, part cash, balance on mortgage. Address Frank Hocker, Sr., owner, Central Islip, N. Y., or Robert E. O'Donohue, broker, Central Islip, N. Y.

## TOWN OF SHELTER ISLAND

Population 1,084

No. 1148.—Farm of 8 acres; located  $\frac{3}{4}$  mile from Shelter Island Heights P. O.;  $1\frac{1}{2}$  miles from ferry and railway station at Greenport on line of Long Island Ry.; 1 mile from school; 1 mile from churches. Highway in good condition. Nearest village, Greenport, population 3,089, distant  $1\frac{1}{2}$  miles, reached by ferry. General surface of farm, slightly rolling. Nature of soil, loam. Fruits, 2 dozen apple, peach and pear trees; currants, gooseberries, raspberries and grapes. Best adapted to asparagus, etc. Fences, hedge and wire, in good condition. House, 12 rooms with bath, in good condition. Outbuildings: 9 large chicken houses, 6 gasoline brooders, a number of small oil and other brooders, 1 grain and packing house, in good condition. Watered, house by windmill. Surrounded by small bays, leading into Peconic Bay and Long Island Sound. Occupied by owner. Price, \$15,000. Will possibly rent, cash payable quarterly. Address Lillie M.

Thorne, owner, Shelter Island Heights, N. Y., or Ralph G. Duvall, agent, Shelter Island Heights, Suffolk Co., N. Y. Will rent with option to buy, other conditions being satisfactory.

## TOWN OF SMITHTOWN

Population 7,073

No. 1149.—Farm of 80 acres; located 1 mile from Kings Park P. O. and railway station on line of L. I. R. R.;  $1\frac{1}{2}$  miles from school; 1 mile from Catholic and Protestant churches. Highways, good. Nearest large village, Northport, population 2,096, 4 miles distant, reached by highway. Surface of farm, level. Altitude, 150 feet. Soil, heavy loam. Acres tillable, 65. Fruit, apples, pears and cherries. Adapted to all farm crops grown in this climate. Fences in fair condition. House, 30x40. Large barns and outbuildings. Watered by well. Occupied by tenant. Price, \$250 per acre. Terms, part cash. Address W. B. Codling, owner, Northport, N. Y.

No. 1150.—Farm of 250 acres; located 2 miles from Hauppauge P. O.; 3 miles from railway station at Smithtown on line of L. I. R. R.; 2 miles from school and churches. Surface of farm, rolling and level. Soil, gravel loam. Acres in natural pasture, 10; in timber, 180, chestnut, oak, cedar and locust. Acres tillable, 60. Fruit, 3,500 peach trees, also apples, plums, pears, quinces and cherries. Adapted to corn, potatoes, etc. Fences, rail. House, 7 large rooms, open fireplace, fair condition. Outbuildings: barn, shed and poultry house. Occupied by tenant. Price, \$175 per acre. Terms, reasonable. Address Henry S. Mott, owner, Northport, L. I., N. Y. Owner will rent.

No. 1151.—Farm of 134 acres; located 1 mile from Kings Park P. O. and railway station on line of L. I. R. R.; 1 mile from school, Catholic and Protestant churches. Nearest large village, Northport, population 2,096, 4 miles distant, reached by highway. Surface of farm, rolling. Altitude, about 50 feet. Soil, gravelly loam. Acres in timber, 90, oak, chestnut and locust. Acres tillable, 40. Some fruit. Adapted to general farming. Fences in fair condition. Small house. No barns. Occupied by owner. Price, \$200 per acre. Address Edgar T. Smith, owner, Kings Park, N. Y. Owner will rent.

## SULLIVAN COUNTY

Area, 911 square miles. Population, 33,808. Annual precipitation, 37.6 inches. Annual mean temperature, 46.3°. Number of farms, 3,851. County seat, Monticello.

This county is located in the southeastern part of the state bordered on the south by Pennsylvania, on the west and southwest by the Delaware River and is drained by the Mongaup, Neversink, Beaverkill and Shawangunk Rivers, Rondout Creek and two branches of Callicoon Creek.

The surface is hilly with a constantly increasing elevation from 1,000 feet in the southern part to 2,400 feet in the extreme north of the county above tide water. It is extensively covered with forests of ash, beech, birch, maple, chestnut, oak and pine. Red sandstone underlies a large part of the surface and bluestone is largely quarried and shipped for flagging, paving, etc. The soil in the north and central sections is largely a formation of red shale. In the southern half of the county it is more rolling and clay and gravelly loam well adapted for grain growing are found. As a whole the soil is quite productive and adapted to pasturage and general farming.

The county produced corn, 146,900 bushels; oats, 138,200 bushels; buckwheat, 96,033 bushels; rye, 23,532 bushels; potatoes, 259,461 bushels; hay and forage, 62,200 tons. Total value of all farm property is \$19,628,466, an increase of 57.4 per cent. in the last ten years. It is noted that even with this great gain the buildings in the county are still worth on an average \$7 per acre more than the land itself. We know of no other state where the land is still fertile as it is in this county in which this condition is found. Domestic animals reported are: dairy cows, 21,230; horses, 7,215; swine, 7,462; sheep, 6,558; poultry, 200,742; production of milk, 8,555,690 gallons, the total value of which was \$683,025. The county is intersected by the N. Y., O. & W. railroad and by the Delaware & Hudson Canal. A branch of the Erie railroad extends from Port Jervis to Monticello. In the central part of the county among the highlands are located many excellent sanitariums and the benefit received seems to be equal to that afforded by the Adirondack regions. The climate is not nearly so cold as in the Adirondacks. The water is noted for its purity and clearness. There are 174 district schools in the county and an excellent academy is located at Monticello with high and graded schools in the villages. The county contains 35 miles of state and county roads and 1,695 of other improved highways; 32 milk stations and factories are conveniently located in the county and its agricultural organizations consist of one county agricultural society, two granges, six Hebrew farmers' associations, a farmers' club and a farm and garden club.

## TOWN OF CALICOON

Population 2,059

No. 1152.—Farm of 55 acres; located 2 miles from Jeffersonville P. O.; 10 miles from railway stations at Callicoon on line of Erie Ry.;  $\frac{1}{2}$  mile from school; 2 miles from churches and butter factory. Highways, good. Surface of farm, rolling and hilly. Altitude, 1,400 feet. Best adapted to hay, corn and oats. Fences, stone and wire. House, good condition, accommodates 40 boarders. Outbuildings in good condition. Occupied by owner. Reason for selling, advanced age of owner. Price, \$5,500, including stock and furniture. Terms, \$3,500 cash, balance on mortgage at 5%. Address Charles Schmidt, owner, Jeffersonville, N. Y.

## TOWN OF COCHECTON

Population 1,142

No. 1153.—Farm of 350 acres, on the western part of Sullivan county, on the Ten Mile River; 6 miles from the railway station at Narrowsburg, on the Erie R. R. This property is located on the main road and cross road at Cochection Center, which is in the direct line of the proposed State road, 2 miles from Lake Huntington, a beautiful summer resort. There is a daily stage service, carrying the mail to and from Narrowsburg, post office, church, general store, school and blacksmith shop, within one block of the house. Acres tillable and in pasture, 150; balance, woodland, second growth white pine, hemlock, birch, beech, maple, about 100,000 feet of lumber, consisting chiefly of pine and hemlock, and about 300 cords

of poplar. Fine trout stream running through property. About 300 yards east of house is an artificial lake, formed by a dam built across the Ten Mile River; this lake is well stocked with pickerel and has an area of about 25 acres; dam has heavy wall, 16 feet through, and faced with about 1 foot of concrete; affords good water power. On the west shore of lake is a beautiful pine grove, good hunting ground for small game such as rabbits and partridges. House, 15 rooms, good condition. Outbuildings: barn, 30x60, with concrete basement, stable for horses and cattle; barn, 36x64, used for storing hay and grain; blacksmith shop and work shop, 20x40; wood and coal house, 16x100, with sleeping room above; hen house, 16x41, with concrete floor. There is a spring on the hillside, with elevation enough to have running water in both house and barn. Reason for selling, death of owner's wife. Price, \$15,000. This price includes horses, cattle, chickens, pigs, wagons, sleighs, harness, all farm machinery and tools. Owner will divide property and sell 325 acres, including barns, stream, lake and woodland, for \$10,000. Address R. B. Heinle, owner, Cochetcon Center, N. Y.

**TOWN OF DELAWARE**  
Population 1,842

No. 1154.—Farm of 50 acres; 6 miles from Callicoon P. O., R. D.; 1 mile from railway station on line of Erie R. R.; 1 mile from school; 1½ miles from churches; 1½ miles from cheese factory. Highways, State road. Nearest village, Jeffersonville, population 800, 2 miles distant. Surface, rolling. Soil, good. Acres in meadow, 15; natural pasture, 10; timber, 5. Acres tillable, 20. Fruit, about 80 apple trees, some pear trees, 15 grapevines. Best adapted to oats, corn, potatoes, hay, etc. Fences, stone, good condition. House, 31x80, 2½ stories, almost new. Outbuildings: barns, 30x40, 38x40; shed, 20x40; good condition. House and barns watered by wells; fields by springs. Kenoza Lake, 1¼ miles distant. This is a fine location for summer boarding place, accommodating 35 people. Occupied by owner. Reason for selling, advanced age of owner. Price, \$7,000, which includes household furniture and farm implements. Terms, ⅔ cash, balance on mortgage. Address Fred Justin, owner, Callicoon, N. Y., R. D. 1. Owner will rent.

**TOWN OF FORESTBURGH**  
Population 545

No. 1155.—Farm of 130 acres; located 2½ miles from Hartwood P. O. and railway station at Hartwood on line of N. Y., O. & W. Ry.; 1½ miles from school; 1½ miles from Catholic and Methodist churches; 2½ miles from milk station. Highway, slightly hilly, in good condition. Nearest village, Monticello, population 1,941, distant 10 miles, reached by rail and highway. General surface of farm, rolling. Altitude, 1,500 feet. Nature of soil, slate. Acres in meadow, 50; in pasture, 25; in timber, 55, chestnut and oak. Acres tillable, 75. Fruit, about 30 apple trees. Best adapted to hay, grain and potatoes. Fences, stone wall, in good condition. House, 7 rooms, fair condition. Outbuildings: fair condition. Watered, house, by running water. Catskill Mts. and Mongaup River, nearby. Price, \$3,000. Terms, cash. Address Thos. J. Mathews, owner, 404 Second Ave., New York City.

**TOWN OF HIGHLAND**  
Population 1,031

No. 1156.—Farm of 50 acres; located 2 miles from Barryville P. O.; 2 miles from railway station at Shohola, Pa. on line of Erie R. R.; 2 miles from school and milk station; 1 mile from Protestant and 2 miles from Catholic churches. Highways, somewhat hilly but good. Surface of farm, some rolling, mostly rough, wild land. Altitude, 1,400 feet. Soil, loam. Acres in meadow, 8; in natural pasture, 3; in timber, 38, white pine, chestnut and oak. Acres tillable, 8. Fruit, currants, gooseberries, 1 plum, 3 apple and 3 peach trees. Best adapted to rye, buckwheat and corn. Fences, wire. Boarding house, 9 rooms, good condition. Outbuildings: barn, 26x30, 3 stories; hen house, ice house, bowling alley and pool room. Watered by spring and brook. Occupied by owner. Price, \$4,500. Terms, \$3,000 cash, balance on mortgage. Address Chas. E. Phillips, owner, Barryville, N. Y. Owner will rent with option to buy.

No. 1157.—Farm of 106 acres; located ¼ miles from Yulan P. O., R. D., 3¼ miles from railway station at Shohola, Pa. on line of Erie R. R.; 1¼ miles from school and churches. Nearest city, Port Jervis, population 9,564, 20 miles

distant, reached by rail or highway. General surface, rolling. Altitude, 1050 feet. Nature of soil, clay loam. Acres in pasture, 50; in timber, 40, pine, hickory and maple. Acres tillable, 16. Fruit, 15 apple trees. Best adapted to poultry, potatoes, grain and hay. Fences, stone wall and wire, fair condition. House, 9 rooms, good condition. Barn, 25x30, poor condition. House watered by well. Fields watered by brook. Occupied by owner. Reason for selling, owner in other business. Price, \$3,200. Terms,  $\frac{1}{2}$  cash, balance on time. This farm is located in a summer boarding section. Good prices can be secured for produce nearby. Address Henry C. Wolff, owner, Yulan, N. Y.

No. 1158.—Farm of 200 acres; located  $\frac{3}{4}$  mile from Eldred P. O.; 5 miles from railway station at Shohola, Pa. on line of Erie R. R.;  $\frac{3}{4}$  mile from school and churches. General surface, hilly. Altitude, 1,200 feet. Nature of soil, red shale and clay loam. Acres in meadow, 50; in timber, 150, which has been cut over. Acres tillable, 40. Fruit, apples, 60 trees, part old, part new. Best adapted to grain, potatoes, hay and corn. Fences, stone wall, fair condition. House, 10 rooms, fair condition. Barn, 40x50, with attachments. House watered by well; barn, by spring; fields, by spring and brook. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,000. Terms, part cash, balance on time. Address John Love, owner, Eldred, N. Y. Owner will rent.

No. 1159.—Farm of 25 acres; located  $2\frac{1}{2}$  miles from Barryville P. O., R. D.; 3 miles from railway station at Shohola, Pa. on line of Erie R. R.; 1 mile from school and churches. General surface, rolling. Altitude, 1,100 feet. Nature of soil, loam. Acres in timber, 13, yellow and white pine and hardwood. Acres tillable, 12. Fruit, 18 apple, 4 plum and 5 pear trees. Best adapted to general farming. Fences, woven wire. House, 26x40, wing, 16x18, good condition. Barn, 28x40, good condition. Watered by spring piped in house; barns by spring. Occupied by owner. Reason for selling, ill health. Price, \$5,000. Terms,  $\frac{1}{2}$  cash. Address C. M. Colville, owner, Barryville, N. Y. Owner will rent.

No. 1160.—Farm of 100 acres; located  $1\frac{1}{2}$  miles from Eldred P. O.,  $5\frac{1}{4}$  miles from Shohola, Pa. railway station, on line of Erie R. R.;  $1\frac{1}{2}$  miles from school and churches. Nearest city, Port Jervis,

population 9,564, 18 miles distant, reached by rail or good highway. General surface, level. Altitude, 1,200 feet. Nature of soil, clay loam. Acres in meadow, 40; in timber, 60. Acres tillable, 40. Fruit, 75 apple trees. Best adapted to hay, grain and potatoes. Fences, stone and wire, fair condition. House, 24x32, with outside kitchen. Barn, 30x40, with lean-to, fair condition. House watered by well; barn by well and spring; fields by springs. Occupied by tenant. Price, \$2,000. Terms, part cash. Reason for selling, owner in other business. Address, John Love, owner, Eldred, N. Y. Owner will rent.

## TOWN OF NEVERSINK

Population 1,743

No. 1161.—Farm of 162 acres;  $1\frac{1}{4}$  miles from Grahamville; 12 miles from Fallsburg. Good stock farm, fine location. Plenty of wood, consisting of about 1,000 sugar maple trees and a quantity of oak and chestnut. Sugar bush, equipped with evaporator for making maple sugar. Fine trout stream. Contains one of the finest locations for a fish pond and hatchery in the State. House, 44x48, with wing, 24x26, in good repair, well painted. Large barns and all necessary outbuildings, nearly new. Watered by springs and brook. Well fenced. Farm is well provided with machinery, new engine, ensi-elevator, 50-ton silo in barn, threshers and cleaner, wood saw, corn planter. Meadows all mowed with machine. Will be sold with or without machinery. Reason for selling, owner not able to work on farm, having only one hand. Price and terms on application to owner, Thomas Barkley, owner, Grahamsville, N. Y.

No. 1162.—Farm of 95 acres; located 1 mile from Neversink P. O.; 7 miles from railway station at Luzon on line of O. & W. R. R.; 1 mile from school;  $1\frac{1}{4}$  miles from Methodist church; 9 miles from milk station. Highways, good condition. Nearest large village, Liberty, population 2,072, 7 miles distant, reached by highway. Surface of farm, slightly rolling. Soil, red loam. Acres in meadow, 35; in natural pasture, 20; in timber, 40, beech, birch and maple. Acres tillable, 35. Fruit, apples, pears, plums and quinces, about 200 trees. Best adapted to oats, buckwheat and potatoes. Fence, barbed wire. House, large, 20 rooms. Outbuildings: barn, 26x36, good condition; other

necessary outbuildings. Watered, house and barns by springs; fields by brook. Occupied by owner. Reason for selling, advanced age of owner. Price, \$4,000. Terms,  $\frac{1}{2}$  down. Address Henry W. Dean, owner, Neversink, N. Y.

TOWN OF ROCKLAND  
Population 3,455

No. 1163.—Farm of 318 acres;  $3\frac{1}{2}$  miles from Livingston Manor on line of O. & W. R. R.; 2 miles from school;  $3\frac{1}{2}$  miles from churches and milk station. Highways, State road. Nearest villages, Livingston Manor,  $3\frac{1}{2}$  miles distant; Liberty, population 2,072, 12 miles distant, reached by rail and highway. Surface of farm, rolling. Altitude, 1,500 feet. Soil, red slate loam. Acres in meadow, 70; in natural pasture, 70; in timber, 140, hemlock, pine and hardwood. Acres tillable, 140; 29 apple and 4 pear trees. Best adapted to hay, potatoes, oats, corn and buckwheat. Fences, wire and stone wall, in fair condition. House, 20x29, with addition, 24x30, fair condition. Barn, 48x56; one, 48x39, and one, 18x24. Watered, house and barns piped; fields piped and watered by springs. Occupied by owner. Reason for selling, owner wishes to go into other business. Price, \$9,000. Terms,  $\frac{1}{2}$  down. Address J. P. Johnston, owner, Livingston Manor, N. Y. Owner will rent with option to buy.

No. 1164.—Farm of 3 acres; located  $4\frac{1}{2}$  miles from Livingston Manor P. O. and railway station on line N. Y., O. & W. R. R.; 1 mile from school;  $1\frac{1}{4}$  miles from church. Highways, good. Surface of farm, nearly level. Altitude, 1,800 feet. Acres that can be used as meadow,  $2\frac{1}{2}$ . Fruit, 6 apple and 5 plum trees. Best adapted to hay and vegetables. Fences, wire, in good condition. House, 12 rooms, in good condition. Outbuildings: small barn, hen house, wood house and laundry. House watered by artesian well. Lake Waneta on border of farm. Occupied by owner. Reason for selling,

ill health. Price and terms on application. Address Mrs. M. Gilmour, owner, Livingston Manor, N. Y.

No. 1165.—Farm of 172 acres; located  $\frac{1}{2}$  mile from Rockland P. O., R. D.; 1 mile from railway station at Roscoe on line of N. Y., O. & W. R. R.;  $\frac{1}{2}$  mile from churches and 1 mile from milk station. General surface, some flat land, some hilly. Altitude, 1,280 feet. Nature of soil, rich loam. Acres in meadow, 40; in natural pasture, 40; in timber, 92, maple, beech, birch, etc. Acres tillable, 40. Fruit, 10 pear, 5 plum, 100 apple and 5 cherry trees. Best adapted to corn, potatoes and grains. Fences, mostly wire, in good condition. House, 40x60, in good condition. Outbuildings: cow barn, 36x98, wagon house, 40x50, granary, 12x14, and milk house, all in good condition. House watered by running water; barns, by running water; fields, by small streams. Near two trout streams. Occupied by owner. Reason for selling, wishes to retire. Price, \$11,000. Terms, cash. Address William T. Elwood, owner, Rockland, N. Y.

No. 1166.—Farm of 80 acres, located  $\frac{1}{2}$  mile from Rockland P. O. R. D.;  $1\frac{1}{2}$  miles from railway station at Roscoe on line of N. Y., O. & W. R. R.,  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from Methodist church and 1 mile from milk station. Highways, stone road. General surface, part river flat, balance hilly. Altitude, 1,200 feet. Nature of soil, river flat, sandy loam. Acres in meadow, 10; in natural pasture, 30; in timber, 40; hemlock, hardwood and basswood. Acres tillable, 25. Fruit, 25 apple, 2 pear, 2 cherry, and plum trees. Best adapted to hay, grain and vegetables. Fences, mostly wire, good condition. House, 12 rooms, good condition, furnace. Barn, 36x40, good condition. Occupied by owner. Reason for selling, ill health. Price, \$3,000. Terms,  $\frac{1}{2}$  cash; balance on mortgage. Address Lavern Allen, owner, Clayville, Va. Owner will rent.

TIOGA COUNTY

Area, 498 square miles. Population, 25,624. Annual precipitation, 47.11 inches. Annual mean temperature, 49.3° Number of farms, 2,844. County seat, Owego.

This county is located in the southern tier of counties in about the center of the state and borders on Pennsylvania. It is intersected by the Susquehanna River. It is also drained by the Owego, Tatatonk and Pipe Creeks.

The surface is finely diversified by broad, verdant hills and valleys, some of which are quite deep. Woodlands of ash, beech, elm, hickory, oak and sugar maple and other trees cover nearly one-third of the county. The soil of the valleys is

largely a deep gravelly loam, rich and fertile. That of the hills in the western section is a clay and gravelly loam. In the north black loam is much in evidence. While south of the Susquehanna River shale and clay loam predominates. The soil is well adapted to general farming and pasturage. The leading crops are corn, 141,680 bushels; oats, 353,398 bushels; wheat, 20,924 bushels; buckwheat, 278,323 bushels; rye, 21,591 bushels; potatoes, 729,523 bushels; hay and forage, 80,889 tons. The value of all farm property is \$11,085,589, a gain of 12.6 per cent. since 1900. The average price of farm lands is \$14.29 per acre, but the average price of improved land is \$27.78. The total production of milk is \$9,595,120 gallons; total receipts from the sale of dairy products, \$841,126.

The county is intersected by the Erie railroad, D., L. & W. main line and branch running north from Owego; and by three branches of the Lehigh Valley railroad. The local markets which may be found in Owego, Elmira, Ithaca and Binghamton are ample for all the products of the county and lie within a very short shipping distance. Buffalo, New York and Philadelphia furnish unlimited markets for those who wish to avail themselves of them.

There are 148 district schools in the county, several standard high schools and a free public academy located at Owego. There is a total of 1,067 miles or highway in the county, only 83 of which are not improved. The agricultural organizations established to conserve agricultural interest consist of a Pomona grange and two subordinate granges, two agricultural societies and two poultry associations.

#### TOWN OF BARTON

Population 6,431

No. 1167.—Farm of 110 acres; located  $\frac{3}{4}$  mile from Waverly P. O., R. D. 1, and railway station, on line of D., L. & W., Erie, and Lehigh Valley R. Rs.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches;  $\frac{1}{4}$  mile from milk station. Highways, good. Nearest large village, Waverly, population, 4,855,  $\frac{3}{4}$  mile distant, reached by highway. Surface of farm, rolling. Soil, clay sub-soil. Acres in meadow, 42; in natural pasture, 25; in timber, 12, pine, oak, etc. Acres tillable, 98. Fruit, 11 apple, 8 cherry, 12 plum, 7 pear and 3 peach trees. Best adapted to corn, oats, potatoes, buckwheat, wheat, etc. Fences, barbed wire, in good condition. House, brick, 10 rooms, in fair condition. Outbuildings: horse barn, 28x32, in good condition; shed, 32 feet long; barn, 30x40, in fair condition; cow barn, 28x40, in poor condition; wagon house, 16x32; woodshed, chicken house, in good condition. Watered, house by spring and well; barns by spring; fields by springs. This farm is  $2\frac{1}{2}$  miles from Susquehanna River. Occupied by owner. Reason for selling, ill health of owner. Price, \$7,500. Terms, \$3,000 cash, balance on time. Address J. E. Walker, owner, Waverly, N. Y., R. D. 1. Owner will rent.

No. 1168.—Farm of 600 acres; located 5 miles from Barton P. O. and railway station on line of Erie R. R.; 1 mile from church and school;  $\frac{1}{2}$  mile from

butter factory and 4 miles from milk station. Highways, good dirt road. Nearest village, Waverly, population 4,855, distant 11 miles, reached by highway. Altitude, 1,000 feet. Nature of soil, loam. Acres in meadow, 100; in timber, 100, all kinds. Acres tillable, 400. Fruit, all kinds. Best adapted to grain, potatoes, hay and corn. Fences, wire, rail and board. Four houses, 2 large ones and 2 tenant. Outbuildings: 10 barns, straw sheds, hen house, hog house and 2 large silos. House and barn watered by spring, fields by wells and creek. Occupied by tenant. Reason for selling, to settle estate. Price, \$17,000. Terms, \$10,000 cash. This price includes 25 cows, sheep, horses, wagons and farm implements. Address Grant and Norman West, executors, Owego, N. Y., or Halls Farm Agency, Owego, N. Y.

#### TOWN OF CANDOR

Population 2,911

No. 1169.—Farm of 93 acres; located  $2\frac{1}{2}$  miles from Straits Corners P. O., R. D. 1; 3 miles from railway station at West Candor, on line of Lehigh Valley R. R.; 1 mile from school and churches; 3 miles from butter factory and milk station; 7 miles from condensing plant. Highways, good. Nearest large village, Owego, population 4,633, 10 miles distant, reached by rail and highway. Surface of farm, half level, balance rolling and some side hill. Soil, 20 acres gravel, balance loam. Acres in meadow, 25; in natural pasture, 25; in timber, 15, hemlock, cherry, ash, beech, etc. Acres till-

able, 68. Fruit, 50 apple, 1 pear, 3 peach, 1 crab apple, 4 cherry and 1 plum tree. Best adapted to buckwheat, oats, corn, potatoes, wheat and hay. Fences, mostly wire, in fair condition. House, 10 rooms, in good condition. Outbuildings: basement, barn, 36x56; shed attached, 20x40; wagon house attached, 26x35; hen house, tool house and hog house. Watered, house by running water; barns by running water; fields by creek and springs. Occupied by owner. Reason for selling, has other interests. Price, \$2,500. Terms, \$1,000 down, balance on bond and mortgage at 5%, easy payments. Address Walter E. Elmdorf, owner, Candor, N. Y.

No. 1170.— Farm of 190 acres; located 1¼ miles from Willseyville P. O. and railway station on line of D., L. & W. and L. V. R. R.; ½ mile from school; 1¼ miles from churches; 1¼ miles from milk station. Nature of highways, fine, level. Nearest city, Ithaca, population 14,802, 11 miles distant, reached by two railroads and highways. Altitude, 800 feet. Nature of soil, gravelly loam. Acres in meadow, 100; in pasture, 50; in timber, 40, hardwood. Acres tillable, 100. Fruit, 42 apple and 2 pear trees. Best adapted to corn and wheat. Pasture fences, woven wire. House, 2 stories, 10 rooms, hardwood finish, in fine condition. Barn, 38x66, hen house and hog house. House and barns watered by springs. Occupied by owner. Reason for selling, has other business. Price, \$6,500. Terms, \$3,500 cash, balance on mortgage at 5%. Address U. G. Kilbury, owner, Willseyville, N. Y.

No. 1171 — Farm of 145 acres; located ½ mile from Candor P. O. and railway station on line of D., L. & W. R. R.; ½ mile from school; ½ mile from churches; ½ mile from butter and cheese factory and milk station. Highways, level. Nearest village, Candor, population 737, ½ mile distant, reached by highway. Surface of farm, level and rolling. Soil, loam and gravel. Acres in meadow, 40; in natural pasture, 40; in timber, 2, mostly for fence posts and ties. Acres tillable, 120. Fruit, few grapevines and apple trees. Best adapted to corn, oats, buckwheat, barley, wheat, rye, hay, potatoes and fruit. Fences, wire, board, rail and stump, in fair condition. House, 2 stories, hip roof, 12 rooms, in fair condition. Outbuildings: carriage house and horse barn, 40x55; hay barn, 40x50; stable, 20x60; hay

barn, 40x80; hog pens, 20x30 and 18x20; silo, 12 feet, octagon, in fair condition. Watered, house by well; barns by well and creek; fields by creeks and springs. The Catatonk Creek runs through the edge of farm and the Susquehanna River is 10 miles distant. Occupied by tenant. Reason for selling, owner has other business. Price, \$7,500. Terms, ½ cash, balance on mortgage at 5% for five years. Address L. A. Hock, owner, 76 Court Street, Binghamton, N. Y. Owner will rent with option to buy.

No. 1172 — Farm of 50 acres; located 1½ miles from Candor P. O., R. D. 2; 1½ miles from railway station at Candor on line of D., L. & W. R. R.; 1/10 mile from school; 1 mile from Congregational church; 2 miles from Methodist and Baptist churches; 2 miles from cheese factory; 1½ miles from milk station. Highways, good. Nearest large village, Owego, population 4,633, 10 miles distant, reached by rail and highway. Surface of farm, hilly, rolling and some level. Soil, loam and clay. Acres in meadow, 28; in natural pasture, 7; in timber, 15, oak, beech, maple, chestnut, second growth. Acres tillable, 35. Fruit, 25 apple, 4 plum, 11 cherry and 1 peach tree, 2 grapevines, 10 currants and 6 gooseberries. Best adapted to oats, wheat, corn, buckwheat, potatoes and all kinds of fruit. Fences, barbed wire and rail, in fair condition. House, 36x32, 6 rooms, in good condition, newly painted. Outbuildings: barn, 24x32, in good condition; 3 small hen houses, in good condition. Watered, house by well; barns by spring; fields by springs and brooks. This farm is 1 mile from Catatonk Creek. Occupied by owner. Reason for selling, wants larger farm. Price, \$1,200. Terms, \$1,000 down, balance on easy payments. Address Clarence E. Wright, owner, Candor, N. Y., R. D. 2.

#### TOWN OF NEWARK VALLEY Population 2,102

No. 1173.— Farm of 100 acres; located 3 miles from Newark Valley P. O., R. D. 2; 3 miles from railway station at Flemingville on line of L. V. R. R.; ½ mile from school, churches, butter factory and milk station. Highways, good. Nearest large village, Owego, population 4,633, 8 miles distant, reached by highway. Surface of farm, 40 acres hilly, 60 acres rolling and level. Soil, clay. Acres in meadow, 60; in natural pasture,

25; in timber, 2, small oak, pine and hemlock. Acres tillable, 80. Fruit, apples, pears, plums and cherries, also 4 grapevines. Best adapted to potatoes, buckwheat, corn and oats. Fences, about  $\frac{1}{2}$  woven wire, balance board, good condition. House, 40x60, 9 rooms, good condition. Outbuildings: horse barn, 30x60; barn, 36x40; cow barn, 36x60; sheep shed, 16x20; tool shed, 20x40; hen house, 12x20 and ice house, 10x10. All buildings newly painted this year. Watered, house by running water; barn by pump; fields by springs. Occupied by owner. Reason for selling, owner wants to use money in other business. Price, \$3,800, includes stock and all tools. Terms, \$1,800 cash, balance on mortgage. Address A. F. Barrott, owner, 574 Main street, Owego, N. Y.

No. 1174.—Farm of 104 acres; located  $2\frac{1}{2}$  miles from Berkshire P. O., R. D. 3; 3 miles from railway station at Newark Valley;  $2\frac{1}{2}$  miles from Berkshire station, on line of Lehigh Valley R. R.; 3 miles from high school;  $2\frac{1}{2}$  miles from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from two condensing plants. Highways, level. Nearest village, Owego, population 4,633, 10 miles distant, reached by rail or state road from Newark Valley. General surface, level and rolling. Altitude, 900 feet. Nature of soil, loam. Acres in meadow, 60; in natural pasture, 34; in timber, 10, chestnut, ash, beech and maple. Acres tillable, 60. Fruit, 10 apple and 10 pear trees, young strawberry and bush berries for home use. Best adapted to potatoes, corn and general farm products. Fences, wire, in fine condition. House, large, 11 rooms, besides closets and halls, heated by furnace. Outbuildings: barn 30x40, with stable 26x45 attached, horse barn 26x40, with addition 12x40; granary 16x24, and garage 12x20. House and barns watered by well; fields, by spring and creek. East branch of Oswego creek runs through farm. Occupied by owner. Reason for selling, owner wants smaller farm. Price \$60 per acre. Terms:  $\frac{1}{2}$  cash, balance 5%. Address W. N. Rice, owner, Berkshire, R. D. 3, N. Y.

## TOWN OF OWEGO

Population 7,474

No. 1175.—Farm of 45 acres; 1 mile south of Apalachin P. O. and railway station on line of D., L. & W. R. R.;  $\frac{1}{2}$  miles from school; 1 mile from Protestant churches; R. D. 1 from Apalachin.

Roads in vicinity, good. Nearest large village, Owego, population 633, 6 miles distant, reached by rail and highway. Occupied by owner. Surface, level and rolling. Soil, clay loam. Acres in meadow, 43; natural pasture, 2; timber, 1, oak and chestnut. Acres tillable, 43. Fruit, 100 apple trees, 100 sour and sweet cherry trees, pears, plums, peaches and grapes. Best adapted to fruits, potatoes and other crops, but especially fruits. Fences, woven wire and rail. House, 16x24, with a 16x20 addition. good cellar, first-class condition. Outbuildings: barn, 30x40; barn, 16x20; barn, 16x32, with basements, in good condition; barns have new roofs; also new carpenter and blacksmith shops. Watered, house and barns by well; fields, by springs. Forest Lake 20 rods from back end of farm. This farm is located in a good neighborhood with a pleasant view of the Susquehanna River. Telephone in house. Farm is in a fine state of cultivation. Reason for selling, poor health of owner. Price, \$2,500. Terms, \$1,000 cash, balance on time. Address Wm. W. Jewett, owner, Apalachin, N. Y.

No. 1176.—Farm of 200 acres; located 6 miles from Owego P. O., R. D. 1 and railway station on line of Erie and D., L. & W. R. Rs.; 4 miles from Newark Valley station on line of Lehigh Valley R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from Methodist church; 6 miles from butter factory; 4 miles from milk station and 5 miles from condensing plant. Highway, State road. General surface, rolling, some level. Nature of soil, mostly loam and shale. Acres in meadow, about 100; in natural pasture, 40; in timber, 20, pine, chestnut, hemlock and hardwood. Acres tillable, 150 or more. Fruit, apples, pears, plums, peaches and cherries. Best adapted to hay, oats, corn, buckwheat, potatoes and rye. Fences, wire, in good condition. House, 11 rooms, in good condition. Outbuildings: barn, 50x78, shed, 30x80, all in good condition. House and barns watered by well, fields by spring. Occupied by tenant. Reason for selling, old age. Price, \$8,000. Terms, 35% down and remainder on easy terms. Address Philip H. Schoolcraft, owner, 399 Main street, Owego, N. Y.

No. 1177.—Farm of 147 acres; located 1 mile from Flemingville P. O., R. D. 3, and railway station on line of Lehigh Valley R. R.; 1 mile from churches and 1 mile from milk station. Highways, State road. Nearest village, Owego,

ral surface, rolling. Altitude, about 300 feet. Nature of soil, loam and clay ubsoil. Acres in meadow, 100; in pas- ure, 15; in timber, 5, hemlock. Acres illable, 110. Fruit, apples, cherries and ars. Best dapted to oats, potatoes, orn and buckwheat. House, 8 rooms, air condition. Outbuildings: basement arn, 80x35, in good condition, 25 tanchions, another barn, 20 stanchions, ilo, and poultry house. House has well t door, barns and fields watered by reek and springs. Owego creek, 1 mile istant. Occupied by te ant. Reason r selling, to settle an estate. Price, 3,500. Terms, \$1,200 cash, balance 5%. Address Springsteel & Vangelder, wners, Elmsford, N. Y., or Hall's Farm agency, Owego, N. Y.

No. 1178.— Farm of 220 acres; located 1 mile from Campville P. O. and railway tation on main line of Erie R. R.; 1 ile from school; 1 mile from Methodist urch and 1 mile from milk station. eneral surface, level and a little hilly. litude, 800 feet. Nature of soil, loam. res in natural pasture, 50; in tim- er, 50, cord wood. Acres tillable, 100.ruit, apples, pears and plums. Best apted to grain and potatoes. Fences, ire and rail. Houses, 2; one of 4 rooms and one of 6 rooms. Outbuildings: 3 arns, 38x52, 28x32, 32x40, in good con- ition, granary, wood house, silo, 18x24, en house, hog house and two sheds. ouses, barn and fields watered by rings. Occupied by owner. Reason r selling, other business. Price, \$5,500. erms, part cash. This farm is 1 mile om Susquehanna River. Address ewis Milleaye, owner, Campville, N. ., or Hall's Farm Agency, Owego, N. Y.

No. 1179.— Farm of 40 acres; located ½ miles from Owego P. O., R. D. 2; 1 mile from railway station at Hia- atha on line of Erie Ry.; 1 mile from hool; 4 miles from churches of all ominations; 4½ miles from butter ctory; 2 miles from milk station; 4½ iles from condensing plant. High- ays, good and level. Nearest village, ewego, population 4,633, reached by rail d highway. General surface of farm, lling and level. Nature of soil, loam. res in meadow, 17; in pasture, 5; in mber, 4, pine, hemlock, oak and chest- ut. Acres tillable, 30. Fruit, 10 ap- e, 2 pear and 15 cherry trees. Best apted to wheat, rye, oats, potatoes, ickwheat and corn. Fences, wire and one walls. House, 20x40, in good con-

dition. Watered, water piped to house, barns, by spring; fields, by springs. The Sus- quehanna River borders on this farm. Price, \$2,200. Terms, \$1,200 down, bal- ance on mortgage 5%. Address C. Kreutzfeldt, owner, Owego, R. F. D. 2, N. Y.

No. 1180.— Farm of 60 acres; located 2 miles from Apalachin P. O. and rail- way station on line of D. L. & W. R. R.; ½ mile from school; 2 miles from churches and milk station. Highways, good. Nearest large village, Owego, population 4,633. 8 miles distant, reached by rail and highway. Surface of farm, practically level. Soil, sandy loam. Acres in meadow, 25; in natural pasture, 2; in timber, 5, pine, hemlock and beech. Acres tillable, 55. Fruit, apples, cherries and grapes. Best adapted to corn, potatoes, oats, wheat and rye. Fences, principally braided wire. House, 10 rooms, good condition, slate roof. Outbuildings: barn, 80x28; barn, 26x30; grain house, wagon house, storehouse, etc. Watered by well and springs. Occupied by owner. Reason for selling, ill health of owner. Price, \$5,000. Terms, ½ down, balance on time. Address Geo. J. Sherwood, owner, Apa- lachin, N. Y.

No. 1181.— Farm of 215 acres; located 6 miles from Owego P. O., R. D., and railway station on line of D. L. & W. R. R.; 1 mile from school; ¾ mile from churches; ¾ mile from butter factory and 6 miles from milk station and con- densing plant. Highways, good. Near- est large village, Owego, population 4,633, 6 miles distant, reached by high- way. Surface of farm, rolling. Soil, loam. Acres in meadow, 135; in nat- ural pasture, 30; in tim' er, 50, mostly hardwood. Acres tillable, 135. Fruit, 50 apple trees. Best adapted to po- tatoes, buckwheat, oats and corn. Fences, wire, rail and stone. House, 10 rooms, in good condition. Outbuildings: barn, 100x45, basement, 20x40; shed, 16x85; horse barn, 30x40. This farm is 4 miles from the Susquehanna River. Occupied by owner. Price \$25 per acre. Terms, easy. Reason for selling, old age of owner. Address J. U. Benjamin, owner, Owego, N. Y. Owner will rent.

#### TOWN OF SPENCER

Population 1,529

No. 1182.— Farm of 80 acres; located 1 mile from Halsey Valley P. O., R. D. No. 2 and railway station at West Can-

dor on line of Lehigh Valley R. R.; 1 mile from school; 1 mile from churches; 1 mile from butter factory; 5 miles from milk station; 7 miles from condensing plant. Highways, good, some hilly. Nearest large village, Owego, population 4,633, 12 miles distant, reached by highway. Surface of farm, rolling. Soil, loam. Acres in meadow, 30; in timber, 15, small beech, birch and maple. Acres tillable, 65. Fruit, 25 apple trees. Adapted to nearly all kinds of crops. Fences, wire, in good condition. House, 11 rooms, in good condition. Outbuildings: barn 32x44; hen house; hog houses and wood house, in good condition. Fine cellar under house and barn. Watered: house by well; barns by spring; fields by springs and brook. Occupied by tenant. Price, \$2,100. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 5%. Address William G. Shaw, owner, Spencer, N. Y. Owner will rent.

No. 1183.—Farm of 824 acres; located 3 miles from Spencer P. O., R. D., and railway station on line of L. V. R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches; 3 miles from milk station; 3 miles from condensing plant. Highways, good, part hilly. Surface of farm, part hilly, part level. Soil, silt loam. Acres in meadow, 200; in natural pasture, 200; in timber, 400, second growth hemlock, chestnut, maple, etc., some large basswood and ash. Acres tillable, 400. Fruit, apples, cherries, peaches, etc. Best adapted to oats, buckwheat, potatoes, etc. Fences, wire and board; wire fences in good condition. House, 30x30, in good condition. Outbuildings: 40x60, with addition, 30x40; barn, 30x30, in good condition. Watered: house by well, barns by spring, fields by springs and creek. Reason for selling, too much land. Price, \$12 per acre. Terms, \$2,000 to \$4,000 cash, balance on mortgage. Address the S. Alfred Seely Co., owners, Spencer, N. Y. Owner will rent with option to buy.

No. 1184.—Farm of 15 acres; located  $1\frac{1}{2}$  miles from Spencer P. O., R. D. No. 1; 2 miles from railway station at Spencer on line of L. V. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches of all denominations; 2 miles from butter and cheese factory; 2 miles from milk station and condensing plant. Highways, good. Nearest city, Ithaca, population 14,802, 14 miles distant, reached by rail and highway. Soil, black loam. Acres tillable, 15. Fruit, 10 cherry trees, apples, 6 pear trees, plums, 4 grape

vines and rhubarb. Best adapted to corn, hay, oats, buckwheat, truck gardening, poultry, etc. House, 8 rooms, in good condition. Barn, 10x40. Watered: house by well, fields by springs. This farm is  $\frac{1}{4}$  mile from Spencer Lake. Occupied by tenant. Price, \$1,600. Terms, \$800 cash, balance on mortgage at 6%. Address Geo. Wallace, owner, La Salle Ave., near Country Club, Niagara Falls, N. Y. Owner will rent.

No. 1185.—Farm of 10 acres; located  $\frac{1}{2}$  mile from Spencer P. O. and railway station on line of Lehigh Valley R. R.;  $\frac{1}{4}$  mile from school, churches and milk station. Nearest city, Ithaca, population 14,802, 18 miles distant, reached by rail or highway. Nature of soil, loam. Acres in meadow,  $7\frac{1}{2}$ . Acres tillable,  $6\frac{1}{2}$ . Fruit, 6 plum, 5 peach, 8 cherry. 15 apple, 10 pear and 2 quince trees, and small fruit. Best adapted to garden truck. Fences, wire, good condition. House, 17 rooms, arranged for two families, good condition. Outbuildings: barn, hog house, poultry house, all in good condition. House, watered by well. Occupied by owner. Reason for selling, other business. Price, \$2,500. Terms, \$1,500 cash, balance on mortgage. Address William Stark, owner, Spencer, N. Y.

## TOWN OF DRYDEN

Population 3,590

No. 1186.—Farm of 64 acres, located  $\frac{1}{4}$  mile from Varna P. O., R. D.; 2 miles from railway station at Ithaca on line of Lehigh Valley R. R.;  $\frac{1}{4}$  mile from churches and 3 miles from condensing plant. Highways, macadam and pavement. General surface, rolling. Nature of soil, loam. Acres tillable, nearly all. Fruit, apples, peaches, plums, cherries, pears and grapes. Best adapted to wheat, corn, buckwheat, barley and oats. Fences, wire, good condition. Large house, excellent condition. Barn, good condition. House watered by well, barns by springs, fields by spring. Cayuga Lake, 3 miles distant. Occupied by owner. Price \$8,000. Terms, cash. Address, Philip Snyder, owner, Varna, N. Y., or J. L. Brink, Broker, Marathon, N. Y.

No. 1187.—Farm of 60 acres, located  $\frac{1}{4}$  mile from Peruville P. O., R. D. 17. Freeville, N. Y.;  $\frac{1}{4}$  mile from railway station at Peruton on line of Lehigh Valley R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{2}$  mile from Methodist church; 3 miles



FIG. 320.—HOUSE ON FARM No. 1044, Tow  
SCHENECTADY COUNTY



FIG. 321.—BUILDINGS ON FARM No. 1132, To  
COUNTY



from butter factory and  $\frac{3}{4}$  mile from milk station. Highways, nearly level, part macadam. Nearest city, Cortland, 10 miles distant, population 11,504 reached by rail or highway. Surface of farm, hilly, rolling and level. Acres in meadow, 35; in pasture, 5; acres tillable, 50. Fruit, apples, pears and grapes. Adapted to general farm crops. Fences, wood, wire and stone, some in good condition, some fair. Eight-room house, fair condition. Two barns. House is supplied with well water; barns and fields, with spring water. Premises are situated within 9 miles of Cayuga Lake. Occupied by tenant. Reasons for selling, to settle estate. Price, \$2,700. Terms, \$500 down, balance to suit buyer. Address Searle Butts, owner, Groton, R. D. 3, N. Y.

## TOWN OF ENFIELD

Population 1,000

No. 1188.— Farm of 102 acres; 2 miles from post office;  $9\frac{1}{2}$  miles from railway station at Trumansburg;  $\frac{1}{2}$  mile from school; 3 miles from churches. Highways, good. Soil, good. Some timber. Fruit, apple orchard. Adapted to any kind of crop. Fences, in fair condition. House, 8 rooms. Two barns, in fair condition. Watered by well, creek and streams. Occupied by tenant. Reason for selling, to settle an estate. Price, \$3,800. Terms, part cash, remainder on time. Address Sophia A. White, owner, 58 Port Watson street, Cortland, N. Y.

## TOWN OF LANSING

Population 2,676

No. 1189.— Farm of 235 acres; located 3 miles from Ludlowville P. O.; 2 miles from railway station at Tarbell on line of N. Y., A. & L. R. R.; 1 mile from school; 2 miles from church; 3 miles from butter factory. Highways, good. Nearest city, Ithaca, population 14,802, 10 miles distant, reached by rail and highway. Surface of farm, nearly level, sloping little to west. Altitude, 900 feet. Soil, gravelly loam. Acres in meadow, 80; in natural pasture, 52; in timber, 70, beech, maple and basswood. Acres tillable, 155. Fruit, 180 trees. Fences, wire, board and rail, fair condition. House, 11 rooms, built 7 years ago. Outbuildings: barn, 30x40; barn, 30x36; barn, 80x24; barn, 16x24; also

small tenant house with barn and log house used as work shop. Watered by well and spring. Occupied by tenant. Price, \$55 per acre. Terms,  $\frac{1}{2}$  cash. Address John R. Conklin, owner, Groton, N. Y. Owner will rent.

No. 1190.— Farm of 53 acres, located 1 mile from Wycoff P. O. and railway station; on line of Lehigh Valley R. R.;  $\frac{1}{4}$  mile from school; 1 mile from churches. Nearest city Ithaca, population 14,802, 6 miles distant, reached by good dirt road. General surface, level. Nature of soil, loam and clay. Acres in meadow 20; in pasture, 30; in timber  $2\frac{1}{2}$ , hardwood. Acres tillable, 50. Fruit for home use. Best adapted to wheat, oats, buckwheat and barley. Fences, wire, fair condition. House, medium size, good condition. Good barn. House watered by two wells; barns and fields, by springs. Price, \$3,000. Terms, part cash. Address Geo. Wolcott, owner, McLean, N. Y., or J. L. Brink, broker, Marathon, N. Y.

No. 1191.— Farm of 63 acres; located  $1\frac{1}{4}$  miles from Heddens P. O., R. D. No. 9; 1 mile from railway station at Lake Ridge on line of L. V. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches; 2 miles from butter factory and milk station. Nearest city, Ithaca, population 14,802, 14 miles distant, reached by rail or highway. Surface of farm, rolling. Soil, clay loam. Acres in meadow, 20; in natural pasture, 10; in alfalfa,  $6\frac{1}{2}$ ; in timber, 8, oak, elm, etc. Acres tillable, 45. Fruit, 1,800 peach, 75 apple, 50 cherry, 300 plum trees. Best adapted to hay, corn, wheat and fruit. Fences, wire, in fair condition. House, 14 rooms, in good condition. Outbuildings: barn, 30x44; fruit house, 35x16; hog house, hen house. Watered: house, by well; barns, by springs; fields, by springs. This farm is  $\frac{1}{4}$  mile from Cayuga Lake. Occupied by owner. Price, \$5,000. Terms, cash. Address, Fred J. Barnes, owner, Ludlowville, N. Y., R. D. No. 9.

No. 1192.— Farm of 48 acres, located  $1\frac{1}{4}$  mile from Heddens P. O., R. D. No. 9;  $1\frac{1}{4}$  miles from railway station at Lake Ridge on line of Lehigh Valley R. R.; 1 mile from school; 3 miles from churches; 2 miles from butter factory. Nearest city, Ithaca, population 14,802, 15 miles distant, reached by hilly highway or rail. General surface, rolling.

Nature of soil, clay and loam. Acres in pasture, 3; in timber, 3, oak and chestnut;  $5\frac{1}{2}$  acres of alfalfa. Acres tillable, 40. Fruit, 30 apple, 180 cherry, 125 plum and some pear trees. Best adapted to wheat and alfalfa. Fences, wire and board, good condition. House, 8 rooms, 2 stories. Outbuildings, barn, 36x20, 16 ft. posts; shed, 20x20. Cayuga Lake,  $\frac{1}{4}$  mile distant. Occupied by heirs of estate. Reason for selling, to settle estate. Price, \$3,500. Terms, apply. Address A. V. Westervelt, owner, Ludlowville, N. Y., R. D. No. 9.

#### TOWN OF NEWFIELD

Population 1,509

No. 1193.—Farm of 200 acres, located 5 miles from Newfield P. O., R. D. No. 30, and railway station on line of L. V. R. R.; 1 mile from school; 5 miles from churches; 5 miles from butter and

cheese factory; 5 miles from milk station; 11 miles from condensing plant. Highways, good. Nearest city, Ithaca, population 14,802, 12 miles distant, reached by highway. Surface of farm, rolling. Good soil. Acres in meadow, 40; in natural pasture, 20; in timber, 10, mostly second growth. Acres tillable, 150. Fruit, two small orchards. Adapted to all farm crops. Fences, wire, in poor condition. House, 16x24; wing, 14x26, in fair condition. Barns, in fair condition. Watered, house by well, barns and fields by springs. This farm is 10 miles from Cayuga Lake. Occupied by owner. Price, \$4,200. Terms,  $\frac{1}{2}$  down, balance on easy terms. Address D. W. Stark, owner, Newfield, N. Y., R. D. No. 30.

No. 1193½—Farm of 80 acres, 2 miles from Newfield. Good house and barn. Well watered. Price, \$1,800. Address Sophia A. White, owner, 58 Port Watson street, Cortland, N. Y.

#### ULSTER COUNTY

Area, 1,150 square miles. Population, 91,769. Annual precipitation, 38.28 inches. Annual mean temperature, 46.3°. Number of farms, 5,022. County seat, Kingston.

This county is located in the eastern part of the state and is bounded on the east by the Hudson River. It is intersected by the Walkill and Rondout Rivers and is drained by the Neversink and the Shawangunk Rivers and by Esopus Creek.

The surface is hilly and partly mountainous and is extensively covered with forests of hickory, oak, chestnut, elm, pine, sugar maple, hemlock, etc. The southern part is occupied by the Shawangunk Mountains and the northern part by the Catskill Mountains. There are several lakes, among which is Lake Mohawk, a popular summer resort. Devonian sandstone is found here in abundance and large quantities are quarried and shipped to New York City and other points by water. Extensive quantities of water lime are used in making Portland cement, an industry which exceeds a million dollars in value annually. The soil is quite productive, especially in the valleys along the Hudson River and is mostly of a clay and gravelly loam; considerable limestone soil is also found. Crops reported are corn, 433,322 bushels; oats, 225,235 bushels; wheat, 24,627 bushels; buckwheat, 93,557 bushels; rye, 103,132 bushels; potatoes, 293,415 bushels; hay and forage, 90,285 tons. Along the Hudson River conditions are exceedingly favorable for the growing of small fruits and apples, pears, peaches, etc. This county ranks first in the production of small fruits and third in the production of grapes. The villages and cities of the county furnish large markets and New York City can be reached quickly and cheaply by way of the Hudson River. The valuation of all farm property is \$29,439,672, an increase of 16.7 per cent. over that of 1900. There is a large acreage offered for sale in this bulletin at a price below the agricultural value of the land. Domestic animals reported: Dairy cows, 23,065; horses, 9,724; swine, 14,843; sheep, 5,721; poultry, 265,195. Total production of milk, 10,702,160 gallons, and the total value of all dairy products is \$1,015,894. Excellent transportation facilities are found in this county and the markets are ample for everything that can be raised. The city of Kingston, the county seat, has a population of 25,908 and is located 85 miles from New York City and 55 miles from Albany. At New Paltz a state normal college is located. Two hundred and eighteen district schools and academies and graded schools in villages give ample educational advantages. There are 74

miles of state and county roads and 1,561 miles of other improved highways. Ulster county has 16 agricultural associations for the promotion of general farming and stock raising.

## TOWN OF GARDINER

Population 2,779

No. 1194.— Farm of 150 acres, located 3 miles west of New Paltz and  $1\frac{1}{4}$  miles from Fourth Glen Station on line of Wallkill Valley R. R.;  $\frac{1}{4}$  mile from school; 3 miles from churches, milk station and milk condensing plant. Highways, good. Surface of farm, mostly level. Acres in meadow, 5; in natural pasture, 16; in timber, 10. Acres tillable, 120. Fruit, 3 acres of apples. Best adapted to general farming. Fences, wire and stone wall, good. House, 62x25, 2½ stories, 14 rooms; tenant house, 2 stories, 4 rooms. Both houses practically new. Barn, 143x30. Watered by well, cistern and spring. Occupied by tenant. Price, \$31 per acre. Terms,  $\frac{1}{2}$  down, balance on mortgage at 5%. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D.

No. 1195.— Farm of 150 acres, located  $2\frac{1}{4}$  miles from New Paltz P. O.,  $1\frac{1}{2}$  miles from railway station at Forest Glen on line of Wallkill Valley Ry.; 1 mile from school;  $2\frac{1}{4}$  miles from churches of all denominations;  $2\frac{1}{2}$  miles from milk station. Highway, good. Nearest village, New Paltz, population 1,230, distance  $2\frac{1}{4}$  miles, reached by highway. General surface of farm, rolling. Altitude, 400 feet. Nature of soil, sandy loam, some silt loam. Acres in meadow, 20; in pasture, 16; in timber, 10; tillable, 124. Some fruit for home use. Fences, stone and wire, in good condition. House, frame, 14 rooms, also cottage of 4 rooms. Outbuildings: barn, capacity 40 head; all other buildings in good condition. Watered, house, by well; barns, by well; fields, by springs. Wallkill River and Shawangunk Mts., 1 mile distant. Occupied by tenant. Price, \$5,550. Terms, \$2,000 cash. Balance on time. Address Henry L. Ross, owner, New Paltz, N. Y., or Westcott & Co., Inc., agents, 137 Broadway, Newburgh, N. Y.

No. 1196.— Farm of 286 acres, located 3 miles west of New Paltz on line of Wallkill Valley R. R.; 1 mile from school; 3 miles from milk station, Catholic and Protestant churches. Highways, good. Surface of farm, rolling. Soil, limestone, good for alfalfa. Acres in meadow, 35; in natural pasture, 50;

in timber, 41, mostly young chestnut. Acres tillable, 160. Some fruit. Best adapted to hay, grain and general farming. Fences, post, wire and stone wall, good condition. House,  $1\frac{1}{2}$  stories with basement, 7 rooms, good condition. Outbuildings: barn, 30x40, with shed attached, 20x40, and other outbuildings, all in good condition. Watered by well and stream. Occupied by tenant. Price, \$10 per acre. Terms,  $\frac{1}{2}$  down, balance on mortgage. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D.

No. 1197.— Farm of 175 acres, located 3 miles west of New Paltz; on line of Wallkill Valley R. R.; 1 mile from school; 3 miles from milk station, Catholic and Protestant churches. Highways, good. Surface of farm, mostly level. Soil, clay loam. Acres in meadow, 10; in natural pasture, 21; in timber, 10. Acres tillable, 128. Some fruit. Best adapted to general farming. Fences, stone wall and wire. House, large, 12 rooms, nearly new, 2 tenant houses, four and five rooms. Outbuildings: barn, 45x45, lean-to attached, 30x40, accommodate 50 head of stock, granary, wagon house and hen house, all in first-class condition. Watered, house, by well and cistern; barns, by well; fields, by stream. Occupied by tenant. Reason for selling, owner in other business. Price, \$27 per acre. Terms,  $\frac{1}{2}$  down, balance on bond and mortgage at 5%. Address Henry L. Rymph, owner, Poughkeepsie, N. Y., R. F. D.

## TOWN OF HARDENBERG

Population 598

No. 1198.— Farm of 255 acres, 2 miles from Lew Beach P. O.; mail delivered daily  $\frac{1}{4}$  mile from house; 11 miles from station at Livingston Manor on line of the N. Y., O. & W. R. R.;  $\frac{1}{4}$  mile from school; 2 miles from Presbyterian and Methodist churches. Highways, fair but hilly. Nearest villages, Shavertown, 8 miles distant, and Livingston Manor, population of 800, distant 11 miles by highway. Surface, rolling. Soil, red slate, clay and loam, mixed. 80 acres of meadow; 90 acres of pasture; 85 acres of brush and timber, hemlock, hard wood, etc.; about 130 acres tillable. Large apple orchard and

a few pear trees. Maple orchard of about 400 trees. Land adapted to raising of oats, rye, buckwheat, potatoes, and to dairying. Fences of stone, wire and wood, in fair condition.  $1\frac{1}{2}$  story house, 9 rooms, in fair condition. Barn,  $26 \times 48$ , with annex,  $14 \times 48$ ; wagon house,  $24 \times 26$ , with annex,  $26 \times 36$ ; granary; hen house; hog pen; sap house, in fair condition. House and barns are watered by springs; fields, have springs and a trout stream. The Beaverkill river is  $\frac{1}{4}$  mile; Lake Marion, 1 mile; Mountain Lake, 2 miles distant. This place is in vicinity of large summer boarding houses and country homes of city people. A good dairy, sheep and poultry farm, with good markets. Occupied by owner. Reason for selling, owner is lame. Price and terms given on application. Will rent with option to buy to desirable parties. Address Byron Barnhart, owner, Lew Beach, Sullivan County, N. Y.

No. 1199.—Farm of 200 acres, located 1 mile from Belleayre P. O.; 8 miles from railway station at Arena on line of U. & D. R. R.; 1 mile from school; 1 mile from churches; 8 miles from butter factory; 8 miles from cheese factory; 8 miles from milk station and 8 miles from condensing plant. Highways, good. General surface, slightly rolling. Altitude, 2,800 feet. Nature of soil, clay loam. Acres in meadow 35; in natural pasture, 65; in timber, 100, beech, birch, maple, hemlock, etc. Acres tillable, 175. Fruit, 75 trees of different varieties. Best adapted to hay, clover, timothy, oats, buckwheat, potatoes, etc. Fences, stone, good condition. House,  $28 \times 30$ , good condition. Outbuildings, barn  $50 \times 60$ , good condition, sugar house. House watered by spring; barns, by spring and fields, by spring. Occupied by owner. Price, \$2,800. Terms,  $\frac{1}{4}$  cash, balance on mortgage. Address Susan M. Marks, owner, North Haven, Conn., or W. T. Austin, broker, Margaretville, N. Y.

#### TOWN OF LLOYD

Population 2,803

No. 1200.—Farm of 140 acres, 3 miles from railway station at Lloyd on line of C. N. E. R. R.;  $\frac{1}{2}$  mile from school and church; 5 miles from butter factory and milk station; R. D. Highways, good. Nearest large village, New Paltz, population about 1,230, 5 miles distant, reached by highway and trolley. Surface of farm, rolling, level and hilly.

Altitude, 500 feet. Acres in meadow, 80; in natural pasture, 40; in timber, 20, chestnut, oak, etc.; acres tillable, 100. Fruit, 300 apple, 100 peach, 15 plum, 18 cherry and 2 quince trees, 2,000 grapevines, about 2,200 dewberry bushes and 800 currant bushes. Best adapted to corn, rye, oats, potatoes and fruit. Fences, wire, stone and rail, fair condition. House, 15 rooms, good condition. Outbuildings: large barn,  $40 \times 36$ ; 2 hay houses,  $18 \times 30$ ; granary; press barn and wagon house, hog house and woodshed. Watered, house and barns, by running spring water; fields, by springs;  $1\frac{1}{2}$  miles from small lake. Occupied by owner. Reason for selling, to close an estate. Price, \$6,000. Terms,  $\frac{1}{4}$  cash, remainder on mortgage. Address Eugene Relyea, owner, Highland, N. Y.

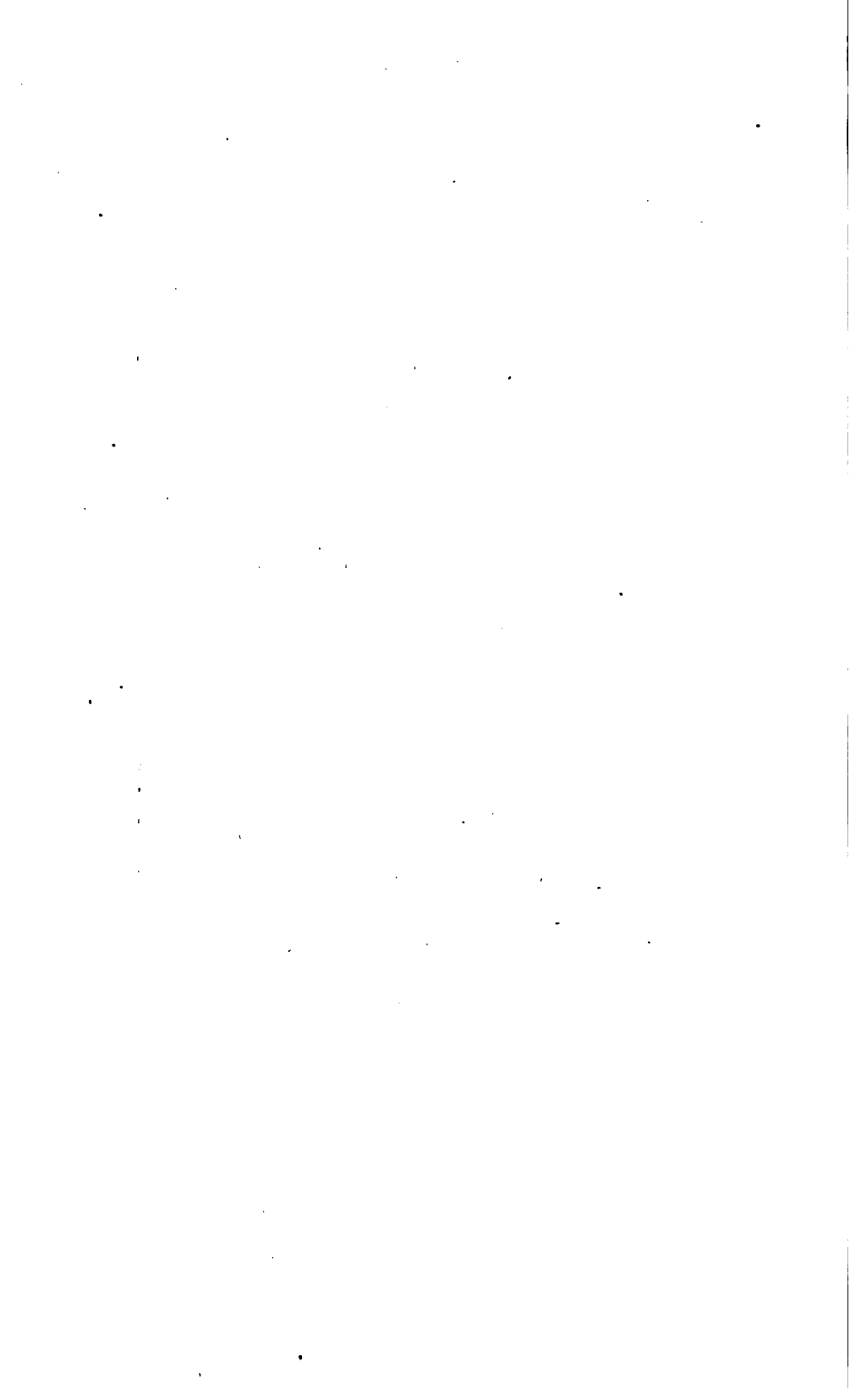
No. 1201.—Farm of 20 acres, located  $2\frac{1}{2}$  miles from Highland P. O., R. D. 1, and railway station on line of West Shore railway;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches. Highways, state roads. Nearest city, Poughkeepsie, population 27,936, distance  $3\frac{1}{2}$  miles, reached by ferry. General surface, rolling. Altitude, 200 feet. Nature of soil, slaty loam. Acres tillable, all. Fruit, 20 apple and 150 pear trees, 3,000 grape vines, berries, etc. Best adapted to all kinds of fruit. Fences, good. House, large 10 rooms. Outbuildings, barn  $22 \times 30$ , hen house  $15 \times 25$ ; fruit packing house,  $12 \times 18$ , all in good condition. House and barn watered by running water; fields, by brook. Hudson river in view. Occupied by owner. Reason for selling, other business. Price \$6,000. Terms,  $\frac{1}{4}$  cash, balance on mortgage at  $5\frac{1}{2}\%$ . Owner has a good class of city boarders in summer, same families year after year. Address Edward Curry, owner, Highland, N. Y., or H. O. Palen, agent, Highland, N. Y.

No. 1202.—Farm of 38 acres, located  $2\frac{1}{2}$  miles from Highland P. O. and railway station on line of West Shore and New York Central R. Rs.; 1 mile from school;  $2\frac{1}{2}$  miles from churches. Highways, good. Nearest city, Poughkeepsie, population 27,936, 3 miles distant, reached by ferry. General surface, rolling. Altitude, 200 feet. Nature of soil, slaty loam. Acres in timber, 20, chestnut, oak, etc. Acres tillable, 18. Fruit, 2 small apple orchards. Best adapted to fruits of various kinds. House, 5 rooms, in good condition. Outbuildings, barn  $20 \times 30$ , fair condition. House and



**FIG. 322.—BUILDINGS ON FARM No. 1194, TOWN OF GARDINER, ULSTER COUNTY**

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CF  
11/12



barns watered by well and spring; fields, by small brook. Farm fronts on the Hudson river for 752 feet. Occupied by tenant. Price, \$5,000. Terms, \$3,000 cash, \$2,000 on mortgage at 5½%. Address H. O. Palen, owner, Highland, N. Y.

No. 1203.—Farm of 20 acres, 2½ miles from Highland P. O. and railway station on line of N. Y. C. & H. R. R. R.; ¼ mile from school; 2½ miles from churches; 2 miles from butter factory, cheese factory, milk station and local markets. Altitude, 600 feet. All tillable. Fruit, 1,000 grapevines, berries, pears, etc. Best adapted to small fruit. Fences, good, wire. House, 10 rooms and porch. Outbuildings: moderate-sized barn, fair condition. Watered, house, by running spring; barn, by well. This farm is 13 miles from Hudson river. Occupied by owner. Reason for selling, owner has other property. Price \$6,300 or \$6,500 all implements included. Terms, part cash. Address Edward Curry, owner, Highland, N. Y., or Edgar Elmendorf, agent, Highland, N. Y.

No. 1204.—Farm of 66 acres; 1½ miles from Highland P. O. and railway station on line of N. Y. C. & H. R. R. R.; ¼ mile from school; 1½ miles from churches. Highways, State road. Acres in meadow, 17, all tillable. Fruit, 700 peach trees, currants, grapes, berries and one apple orchard. Best adapted to fruit, poultry and sheep. Fences, in good condition. House, 12 rooms, fair condition, with improvements. Barn, in good condition. Watered by artesian well. Hudson river, 1 mile from farm. Occupied by owner. Reason for selling, owner has another farm. Price, \$9,500. Terms, part cash. Price includes farm implements. Address F. Burgess, owner, Highland, N. Y., or Edgar Elmendorf, broker, Highland, N. Y.

No. 1205.—Farm of 129 acres, located 1½ miles from Clintondale P. O. R. D. 4; 1 mile from railway station on line of Central New England railway; 1½ miles from school; 1½ miles from churches. Highways, good. Nearest city, Poughkeepsie, population 27,936, distance 6 miles, reached by highway and trolley. General surface, rolling. Altitude, 700 feet. Nature of soil, loam. Acres in meadow, 20; in natural pasture, 14; in timber, 20, several kinds. Acres tillable, 65 to 75. Fruit, 200 apple, 300 or 400 peach and 200 pear trees and 7,000 or 8,000 young currant

bushes. Best adapted to fruit and all kinds of crops. Fences, stone wall. House, 12 rooms, 2 large halls, good condition, 2 story tenant house, in good condition. Outbuildings, large barn, shed 30x60, garage, barn has concrete floor, room for 16 cows and 6 horses, all in good condition. House and barn watered by running water; fields, by brook and spring. Occupied by owner. Reason for selling, ill health. Price \$10,000. Terms, ½ cash, balance on mortgage. Address C. D. Terry, owner, R. D. No. 4, Highland, N. Y., or Elting Harp, agent, New Paltz, N. Y.

## TOWN OF NEW PALTZ

Population 3,025

No. 1206.—Farm of 125 acres; 2½ miles from New Paltz. Good soil, adapted to fruit and vegetables. 13 acres of timber, 80 acres of meadow, 15 acres of fruit, 20 acres pasture. Five miles from Lake Mohonk. Large house, 14 rooms, nearly new. Modern improvements. Three good barns. 2 hen houses and other outbuildings, all in good condition. Running water through house, bath, fire protection. Price, \$8,000. Terms, part cash. Address D. W. Corwin, owner, New Paltz, N. Y., R. D. 2.

No. 1207.—Farm of 100 acres; located 2½ miles from New Paltz P. O. and railway station on line of Wallkill Valley R. R.; ¼ mile from school; 2½ miles from churches; 2½ miles from milk station. Highways, good. Nearest village, New Paltz, population 1,230, 2½ miles distant, reached by highway. Surface of farm, slightly rolling. Altitude, 300 feet. Soil, loam and black soil. Acres tillable, 90. Fruit, 150 trees, pears, cherries, plums, etc. Best adapted to hay, grain and fruit. House, 9 rooms, in good condition. Outbuildings, barn, hay barn, wagon house, granary, in good condition. Watered: house and barns, by gravity system; fields, by springs and brook. Price, \$5,000. Terms, ½ cash. Address S. B. DuBois, owner, New Paltz, N. Y., or Elting Harp, agent, New Paltz, N. Y.

No. 1208.—Farm of 35 acres; 1½ miles from railway station at Lloyd; ½ mile from school; ½ mile from churches; 2 miles from milk station. Nearest village, New Paltz, population 1,230, 2½ miles distant, reached by trolley or highway. Surface of farm, level. Soil, gravelly loam, and black soil. Fruit, 50 apple

trees. Best adapted to celery, cabbage, onions, all garden truck and fruit. House, 6 rooms, in fair condition. Outbuildings, barn, wagon house, granary, in fair condition. Watered: house and barns by well; fields by brook. Reason for selling, owner unable to look after same. Price, \$1,800. Terms on application. Address Mary A. Healey, owner, Rosendale, N. Y., or Elting Harp, agent, New Paltz, N. Y.

No. 1209.—Farm of 116 acres, located 2 miles from New Paltz P. O., R. D. No. 3; 2 miles from railway station on line of Wallkill Valley R. R.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches and  $1\frac{1}{2}$  miles from milk station. General surface, level. Altitude, 400 feet. Acres in meadow, 85; in natural pasture, 16; in timber, 5, maple, elm and oak. Acres tillable, 87. Fruit, 110 apple, 10 peach, 9 pear, 6 cherry and 5 plum trees. Best adapted to hay, rye, oats and corn. Fences, wire and stone, in good condition. House, 2-stories, frame, 13 rooms, hot water heat. Outbuildings: barn No. 1, 56x66; barn No. 2, 18x30; barn No. 3, 15x31; barn No. 4, 18x27; new silo, ice house and milk house, all in good condition. House and barn watered by wells; fields, by brook. Occupied by owner. Reason for selling, ill health. Price, \$7,500. Terms, one-half cash, balance on mortgage. Address T. J. Kennedy, owner, New Paltz, N. Y., or Elting Harp, agent, New Paltz, N. Y.

No. 1210.—Farm of 100 acres; located near Springtown railway station on line of Wallkill Valley R. R.;  $\frac{1}{2}$  mile from school and churches; 3 miles from butter and cheese factory and milk station. Nearest village, New Paltz, population 1,230, 3 miles distant, reached by rail or good highway. General surface, rolling and level. Nature of soil, sandy loam and clay. Acres in timber, 20, second growth; acres tillable, 80. Fruit, variety. Best adapted to fruit, grain, vegetables and hay. Fences, barbed wire. House, 15 rooms, 40x80; tenant house, 4 rooms. Annex to house of 9 rooms. Outbuildings: barn, 40x80, good condition, 14 stanchions, 8 single and two box stalls; hog house 10x12; poultry house, 12x40; wagon house, 20x20; granary, 15x20; ice house, 16x16. House watered by wells; barns, by wells; fields, by spring and brook. Occupied by owner. Reason for selling, wishes to retire. Price, \$9,500. Terms, \$6,000 cash, balance on mortgage at 5%. Ad-

dress John H. Relyea, owner, R. D. 2 New Paltz, N. Y., or J. Sterling Drake broker, 29 Broadway, New York.

No. 1211.—Farm of 116 acres; located  $\frac{1}{4}$  mile from Ohioville P. O.; 2 miles from railway station at New Paltz on line of Wallkill Valley R. R.; 2 miles from school and churches; 2 miles from milk station. Population of New Paltz, 1,230, reached by good gravel highway and electric road. General surface, level. Altitude, 400 feet. Nature of soil, rich loam. Acres in meadow, 85; in pasture, 20; in timber, 6, oak and chestnut. Acres tillable, 85. Fruit, 5 acres of apples. Best adapted to hay, corn, oat and rye. Fences, stone and wire. House, frame, 2 stories, 12 rooms, good repair. Outbuildings: large barn, carriage house, milk house, ice house, silo, all in good condition. House and barns watered by wells; fields, by spring and well. Occupied by owner. Reason for selling, ill health. Price, \$8,500. Terms, \$4,500 cash, balance on mortgage. Price includes 18 cattle, 2 horses, poultry, pigs, all machinery, implements and crops. Address Thomas J. Kennedy, owner, Ohioville, N. Y., or Edward C. Dayton, broker, Poughkeepsie, N. Y.

#### TOWN OF PLATTEKILL

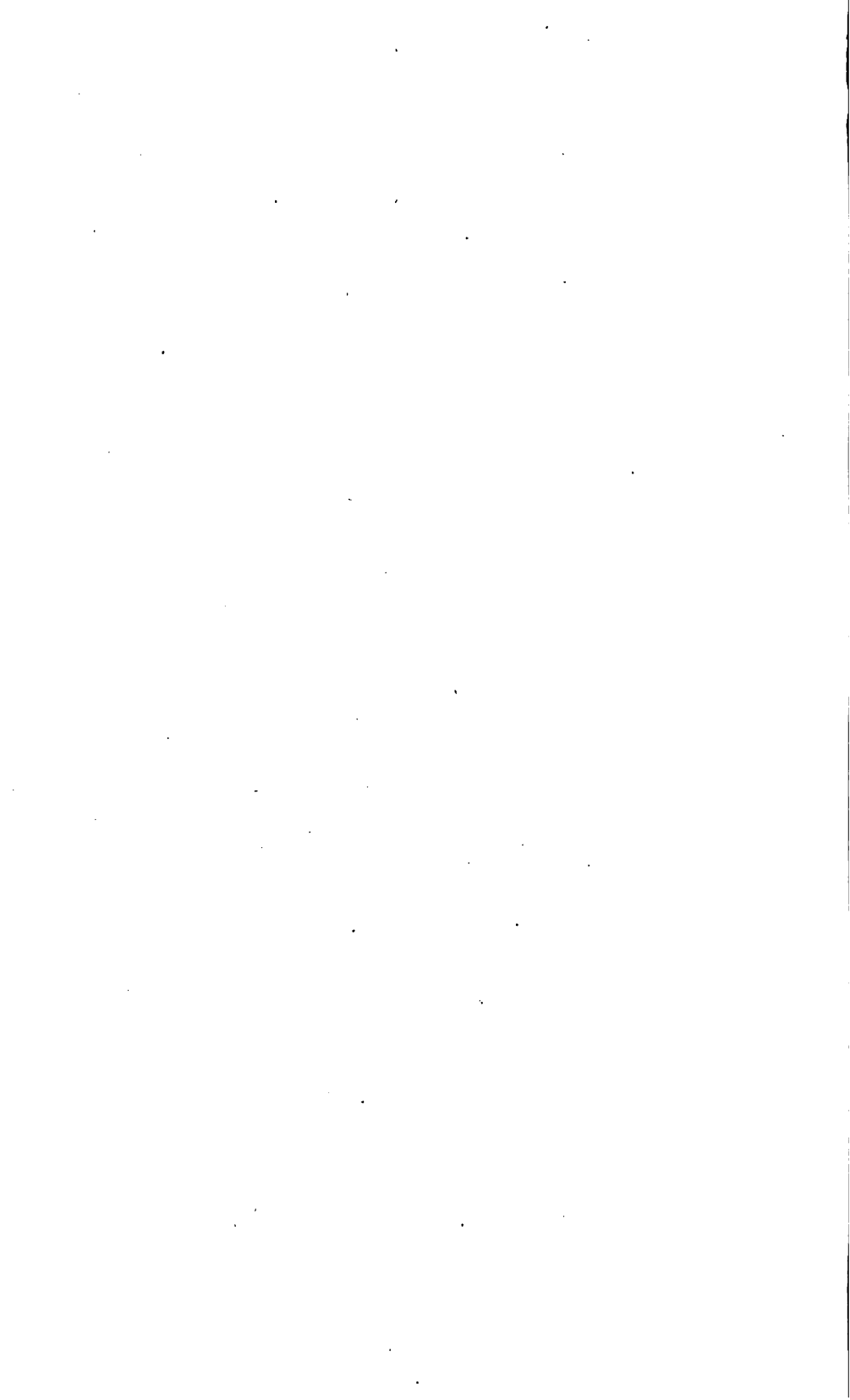
Population 1,879

No. 1212.—Farm of 96 acres; located 4 miles from Highland P. O., R. D. No. 3 and railway station on line of West Shore R. R.;  $\frac{1}{4}$  mile from school; 2 miles from churches; 2 miles from butter factory and milk station. Highways, good. Nearest city, Poughkeepsie, population 27,936, 5 miles distant, reached by highway and rail. Altitude, 400 feet. Acres in pasture, 20; in meadow, 20; acres tillable, all. Fruit, 10 acres of grapes, some apples and pears. Best adapted to grain, hay and fruits. Fences, stone wall, in fair condition. House, large, 11 rooms. Outbuildings: large barns, granary, hog house, poultry house, wood house and tool house. House and barns watered by running spring; fields, by trout brook. Occupied by owner. Reason for selling, owner a woman and cannot attend to it. Price, \$7,800. Terms, \$4,000 cash, balance on mortgage at  $5\frac{1}{2}$  per cent. Address Mary Palmatier, owner, Highland, N. Y., or H. O. Palen, agent, Highland, N. Y.

No. 1213.—Farm of 12 acres; located 4 miles from Milton and 2 miles from Ardonia post-offices; 4 miles from rail



FIG. 323.—HOUSE AND BUILDINGS ON FARM NO. 1196, TOWN OF GARDINER,  
ULSTER COUNTY



way station at Milton and Modena on lines of the West Shore and New England Rys., respectively;  $\frac{1}{2}$  mile from school; 1 mile from Methodist church; 4 miles from milk station and condensing plant. Highway, level, in fair condition. Nearest village, Milton, population 1,007, reached by highway. General surface of farm, rolling. Altitude, 600 feet. Nature of soil, loam and muck. Acres tillable, 12. Best adapted to onions, potatoes and corn. Fences, stone, in fair condition. Fields watered by brook. Marlborough Mts. close by; Hudson River, 4 miles distant. Reason for selling, to settle estate. Price, \$600. Terms, cash. Address Emma Conn, owner, Highland, R. F. D., or Milton, N. Y.

No. 1214.—Farm of 100 acres; located 1 mile from Modena P. O. and railway station on line of N. Y., N. H. & H. R. R.;  $1\frac{1}{4}$  miles from school and churches;  $1\frac{1}{2}$  miles from butter and cheese factory, milk station and condensing plant. Highway, good. Altitude, 700 feet. Acres in meadow, 20; in pasture, 40; acres tillable, 100. Fruit, 300 apple and 300 peach trees. Best adapted to hay, grain, corn, fruit and dairying. Fences, wall, good. House, 11 rooms, good condition. Outbuildings: large barn, silo, ice house, carriage house, poultry house, etc., all in good condition. House watered by cistern; barns, by wells; fields, by springs and brook. Occupied by tenant. Price, \$5,700. Terms, \$1,500 to \$2,000 cash. Address J. E. Has Bronek, owner, Modena, N. Y., or Edgar Elmendorf, agent, Highland, N. Y.

No. 1215.—Farm of 50 acres; located 2 miles from Ardonia and 4 miles from Milton post-offices; 4 miles from railway station at Milton and Modena on lines of the West Shore and New England Bridge Rys.;  $\frac{1}{2}$  mile from school; 1 mile from Methodist church; 4 miles from milk station and condensing plant. Nature of highway, rolling, in good condition. Nearest village, Milton, population 1,007, reached by highway. General surface of farm, rolling. Altitude, 600 feet. Nature of soil, good loam. Acres in meadow, 10; in pasture, 10; small extent of woodland; acres tillable, 40. Fruit, chiefly raspberries; other fruit, 4 acres. Best adapted to general farm crops and fruits. Some valuable muck land, suitable for onions, etc. Fences, stone, in fair condition. House,  $1\frac{1}{2}$  stories, in fair condition. Watered,

house, by springs and cisterns; barns, by well; fields, by brook. Hudson River, 4 miles distant. Occupied by owner. Reason for selling, to settle estate. Price, \$3,500. Terms,  $\frac{1}{2}$  may remain on mortgage. Address Mrs. Jennie Kostendieck, owner, Highland, N. Y., R. F. D.

No. 1216.—Farm of 50 acres; located 2 miles from Ardonia and 4 miles from Milton post offices; R. F. D. from Highland, N. Y.; 4 miles from railway station at Milton and Modena on the lines of the West Shore and New England Bridge Rys.;  $\frac{1}{2}$  mile from school; 1 mile from Methodist church; 4 miles from milk station and condensing plant. Highway, hilly, in fair condition. Nearest village, Milton, population 1,007, reached by highway. General surface of farm, rolling. Altitude, 600 feet. Nature of soil, rich gravelly loam. Acres in meadow, 10; in pasture, 10; in timber, 10, general variety of hardwood; acres tillable, 30. Best adapted to general farm crops and fruit. Fences, stone, in fair condition. House, large, in fair condition. Barns, outbuildings, large, fair condition. Watered, house, by cistern and well; barns, by well; fields, by brook and spring. Marlboro Mts. near by; Hudson River, 4 miles distant. Occupied by owner. Reason for selling, to settle estate. Price, \$2,500. Terms, cash. Address Emma Conn, owner, Highland, N. Y., R. F. D.

## TOWN OF ROCHESTER

Population 2,760

No. 1217.—Farm of 143 acres; 3 miles from Mombaccus P. O., R. D. No. 1;  $6\frac{1}{2}$  miles from railway station at Kerhonksen on line of O. & W. R. R.,  $1\frac{1}{4}$  miles from school;  $\frac{3}{4}$  mile from church;  $6\frac{1}{2}$  miles from milk station. Highways, hilly, but good. Nearest city, Kingston, population 23,908, 26 miles distant, reached by rail. Surface, part level and part hilly. Soil, mostly gravelly loam. Acres in meadow, 20; in orchard and natural pasture, 65; in timber, 58, chestnut, hickory and oak; acres tillable, 85. Fruit, about 375 trees, mostly apple. Best adapted to hay and fruit. Fences, wire and stone wall, in good condition. House, 24x38, wings, 15x31, and 10x12, in good condition. Barn, 27x70, with large shed and stable attached; carriage house, 22x26; all in good condition. Watered by well and spring. Fine sites for 3 small fish ponds, never-failing spring. Occupied by tenant. Reason for selling, advanced age of owner.

Price, \$4,000. Terms, \$1,500 cash, balance on mortgage at 5%. Address H. D. & S. E. Brodhead, owners, Kerhonksen, N. Y.

#### TOWN OF SAUGERTIES

Population 9,632

No. 1218.—Place of 10 acres;  $\frac{1}{4}$  mile from West Camp P. O. and railway station on line of W. S. R. R.;  $\frac{1}{4}$  mile from school and church;  $1\frac{1}{2}$  miles from butter factory. Nearest large villages, Saugerties, population 3,929,  $3\frac{1}{2}$  miles distant, reached by rail and highway, and Catskill, population 5,296, 8 miles distant, reached by rail and highway. Surface of farm, rolling, with high rock ridge overlooking Hudson river. Altitude, about 300 feet. Soil, gravelly and clay loam. Acres in meadow, 3; in natural pasture, 1; in timber,  $\frac{1}{4}$ , cedar grove; acres tillable, 8. Fruit, 60 apple trees,  $\frac{1}{4}$  acre of Concord grapes, besides cherries and plums. Adapted to all kinds of vegetables, grains, alfalfa and small fruits. Fences, stone, wire and wood, fair condition. House, 8 rooms, 18x32, outside summer kitchen, 12x14, house has new cedar shingling. Outbuildings: barn, 26x30, with ell, 18x22, shed, wagon house, 12x18; and hog house, 12x12. Watered: house, by never-failing spring and cistern; fields, by spring near center of farm. This farm is a short distance from Hudson river, about 10 minutes' walk. Catskill Mountains are about 8 miles from farm; Haaterskill and Old Mountain House in view. This would make a good poultry farm. Occupied by tenant. Reason for selling, owner has other business. Price, \$2,500. Terms, \$1,500 cash, balance on time or will sell on contract. Address E. F. Youngs, owner, West Camp, N. Y., Box 25.

No. 1219.—Farm of 40 acres; located 2 miles from Glasco P. O., R. D. 4; 2 miles from railway station at Lake Katrine on line of West Shore Ry.; 5 rods from school;  $\frac{1}{2}$  mile from Reformed church. Highway, State road, in good condition. Nearest village, Saugerties, population 3,929, distant 5 miles, reached by highway. General surface of farm, level. Nature of soil, clay, loam and gravel. Acres in meadow, 30; in pasture and timber, 10, red cedar and white pine; acres tillable, 30. Fruit, apples, plums, pears, peaches and cherries. Best adapted to general farming. House, 14 rooms, good condition. Barn, 40x40; wagon house, 20x30; hen house, 12x20;

granary, wood house, all in good condition. Watered: house, by well and cistern; barns, by well; fields, by spring and brook. Catskill Mts. 12 miles; Katrine Lake  $1\frac{1}{2}$  miles; Hudson River 1 mile distant. Occupied by owner. Reason for selling, poor health. Price, \$5,000. Terms,  $\frac{2}{3}$  cash. Eight miles from Kingston, population 25,908. Address Peter J. Turck, owner, Saugerties, N. Y., R. F. D. 4.

No. 1220.—A tract of land of about 40 acres; 8 miles from Kingston, population 25,908, 6 miles from Saugerties, population 3,929;  $4\frac{1}{2}$  miles from railway station at Saugerties on line of W. S. R. R.;  $3\frac{1}{2}$  miles. State road, 1 mile tram road, good;  $2\frac{1}{2}$  miles from railway station at Mt. Marion, on line of W. S. R. R.; 15-minute walk from school; R. D. Situated midway between the Catskill Mountains and the Hudson River, on an elevation which brings it in full view of the Catskills and other points of interest in the Hudson Highlands. This property is easily reached by rail or highway and is suitable for a summer residence. The entire place is well covered with a growth of fine timber. In addition to this there is a large quantity of blue sandstone which has been quarried, from which could be constructed foundations or first stories of bungalows or cottages. There is, almost in the center of the property, an open meadow field, comparatively level and free from brush on which could be raised an abundance of hay and vegetables for use, or pleasure grounds could be constructed. Several never-failing springs furnish an abundant supply of the purest water. There is a stream of considerable size close to the border of the property from which, by hydraulic force, water could be distributed over the premises to any point desired, at a very low cost. The new park which has just been laid out in the foothills of the Catskill Mountains will be but a short distance from these premises. There are no buildings on the property. Reasons for selling, owner has other business and lives too far away to look after property. Price, \$600. Terms,  $\frac{1}{2}$  down, balance on mortgage at 4%. Address Miss M. D. Wickham, owner, 444 I. W. Hellman Bldg., Los Angeles, Cal. Owner will rent the whole or any part of this property for camping sites.

No. 1221.—Farm of 100 acres; located 5 miles from Saugerties P. O., R. D. 3; 4 miles from railway station at Mt.

**Marion** on line of W. S. R. R.;  $\frac{1}{2}$  mile from school and churches; 5 miles from milk station. Nearest city, Kingston, population 25,908, 5 miles distant, reached by rail or rolling highway. General surface, rolling. Altitude, 700 feet. Nature of soil, loam. Acres that can be used as meadow, 50; in pasture, 25; in timber, 25, pine, oak and chestnut; acres tillable, 50. Fruit, 100 apple trees, plums, cherries and pears. Best adapted to hay, grain, rye, oats and corn. Fences, stone, in good condition. House, 7 rooms, good condition. Large barn in fine condition; new hen house; wagon house. House and barn watered by wells; fields, by springs. Reason for selling, death in family. Price, \$1,900. Terms, \$700 cash, balance on mortgage for 3 years. Address George Lasher, owner, Saugerties, N. Y., or Edward Moran, broker, Saugerties, N. Y.

**No. 1222** — Farm of 99 acres; located 6 miles from Saugerties P. O., R. D. 3 and railway station on line of W. S. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches; 6 miles from milk station. Population of Saugerties, 3,929, reached by good highway. General surface, slightly rolling. Altitude, 1,000 feet. Nature of soil, loam. Acres in meadow, 40; in pasture, 25; in timber, 30, oak, pine and chestnut; acres tillable, 40. Fruit, 40 trees, apples, cherries, etc. Best adapted to hay and grain. Fences, stone, in good condition. House, 6 rooms,  $1\frac{1}{2}$  stories. Outbuildings: barn, 30x40; wagon house, wood house and hen house, all in good condition. House and barns watered by wells; fields, by springs. Occupied by owner. Reason for selling, advanced age. Price, \$2,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 5%. Address Edward Burton, owner, R. D. 3, Saugerties, N. Y., or Edward Moran, broker, Saugerties, N. Y.

**No. 1223.** — Farm of 45 acres; located 5 miles from Saugerties P. O., R. D. 2 and railway station on line of W. S. R. R.;  $\frac{1}{2}$  mile from school and churches; 3 miles from milk station. Population of Saugerties 3,929. General surface, level. Altitude, 1,500 feet. Nature of soil, loam. Acres in meadow, 20; in pasture, 5; in timber, 5, oak, pine and chestnut; acres tillable, 20. Fruit, 100 trees, apples, pears, etc. Best adapted to hay and grain. Fences, stone, in good condition. House, 7 rooms, in good condition. Barn and outbuildings in

good condition. House and barn watered by wells, fields by springs. Occupied by owner. Reason for selling, advanced age. Price, \$1,100. Terms,  $\frac{1}{2}$  cash, balance on mortgage at 5 %. Address Mary K. Hommel, owner, R. D. 2, Saugerties, N. Y., or Edward Moran, broker, Saugerties, N. Y.

**No. 1224.** — Farm of 103 acres; locate 2 miles from railway station at Woodstock on line of U. D. Ry.;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches of all denominations; 7 miles from butter factory; 5 miles from milk station; 10 miles from condensing plant. Highway, good. Nearest city, Kingston, population 25,908, 5 miles distant, reached by rail and highway. General surface of farm, level. Altitude, 1,000 feet. Nature of soil, loam. Acres in meadow, 50; in pasture, 30; in timber, 23, pine, hemlock and chestnut; acres tillable, 50. Fruit, 200 trees, all bearing. Best adapted to hay, oats, corn, potatoes and rye. Fences, rail, in good condition. House, 2 stories, 7 rooms, in good condition. Outbuildings, 2 large barns, in good condition, large wagon house, granary, hog house, and smoke house. Watered, house, by well; barns, by well; fields, by stream. Catskill Mts.,  $\frac{1}{2}$  mile distant. Occupied by tenant. Reason for selling, to settle estate. Price, \$3,400. Terms, \$1,000 cash, balance on mortgage for 3 years at  $5\frac{1}{2}\%$  first year and 5% thereafter. Address Eli Lasher, owner, Carteret, N. J., or Edward Moran, agent, Saugerties, N. Y.

## TOWN OF SHANDAKEN

Population 2,657

**No. 1225.** — Farm of 50 acres; located 2 miles from Allaben P. O.; 2 miles from railway station at Shandaken on line of Ulster & Delaware Ry.;  $1\frac{3}{4}$  miles from school; 2 miles from Methodist and Catholic churches; 10 miles from butter factory; 15 miles from cheese factory; 2 miles from milk station. Highways, good. General surface of farm, level. Altitude, 200 feet. Good soil. Acres in meadow, 35; in pasture, 10; in timber, 5; acres tillable, 35. Fruit, over 200 apple trees. Best adapted to potatoes, corn, rye and oats. Fences, pole. This farm has plentiful water supply. Catskill Mts., 2 miles distant. Reason for selling, owner has a larger farm. Price, \$1,000; terms cash. Address Mrs. Emerson Van Valkenburgh, owner, Westkill, N. Y.

## TOWN OF ULSTER

Population 3,554

No. 1226.—Farm of 107½ acres; located 1 mile from Kingston P. O., R. D. 1, and railway station on line of West Shore, U. & D., Wallkill Valley, N. Y. O. & W. R. Rs.; 1 mile to school; 1 to 3 miles to churches of all denominations. Highways, State road. Nearest city, Kingston, population 25,908, 1 mile distant, reached by highway or trolley. Surface of farm, level, hilly and rolling. Acres in meadow, 75; in natural pasture, 60. All tillable. Fruit, about 70 trees, apple, pear, cherry and mulberry.

Best adapted to grain, fruit, hay, etc. Fences, wall and wire, in fair condition. House, 10 rooms, in good condition. Out-buildings: stable 110x66, ice house, milk house, granary, hen house of concrete, silo, large hay barn, also main barn equipped to produce certified milk. Watered, house by well and cistern; barns by well and windmill; fields by springs, pond and brook. This farm is 3 miles from the Hudson River. Price, \$35,000, with dairy of 50 cows, \$30,000 without dairy. Terms, \$10,000 to \$15,000 cash, balance on mortgage. Address Mrs. C. R. Knapp, owner, 136 Dana ave., Albany, N. Y.

## WARREN COUNTY

Area, 940 square miles. Population, 32,223. Annual precipitation, 32.41 inches. Annual mean temperature, 45.2°. Number of farms, 1,865. County seat, Lake George.

This county is located in the eastern part of the state and is bounded on the east by Lake George and is intersected by the upper Hudson River and is partly drained by the Schroon River.

The surface is mountainous and extensively covered with forests of beech, hickory, oak, elm, pine, spruce, sugar maple and hemlock. Many of the mountains and hills are steep and present a broad surface of barren rock. Gneiss and granite are the predominate rocks of the county. Trenton limestone and Potsdam sandstone are found in the southeastern part, also black marble. The valleys are fertile and well adapted to pasture. The soil is largely clay loam along the Hudson and Schroon River Valleys, while that in the region of and south of Lake George is sandy and gravelly loam. Crops are reported as follows: Corn, 60,750 bushels; oats, 39,595 bushels; buckwheat, 30,524 bushels; potatoes, 163,673 bushels; hay and forage, 25,345 tons. Lumber is one of the leading products of the county. The total valuation of farm property is \$6,589,308, an increase of 61 per cent. during the past ten years. Domestic animals reported are dairy cows, 5,387; horses, 3,221; swine, 2,070; sheep, 12,111; poultry, 48,354; production of milk, 2,396,268 gallons; dairy products amounted to \$170,423. The county is traversed by the Adirondack division of the Delaware and Hudson railroad and one of its branches from Fort Edward to Lake George. Trolley lines from Albany, Troy, Schenectady and Saratoga Springs extend up through the county as far north as Warrensburg, through Lake George. Union and graded schools in the villages and towns, an academy at Glens Falls, with 111 district schools, afford the best of educational facilities for the farmer. There are 70 miles of state and county roads, 791 miles of improved highways. Milk stations and creameries are located at Glens Falls and Lake George. In the county are three granges and one county fair society. Much of the increase of the value of farms and farm buildings is brought about by the large number of men of means purchasing tracts for summer homes and cottages in the mountains and along the lake shores.

## TOWN OF BOLTON

Population 1,518

No. 1227.—House and lot, ¾ acre; in Bolton; 8 miles from railway station at Lake George on line of D. & H. R. R.; ¼ mile from school; 1 mile from church. Highways, good, State road. Nearest large village, Bolton Landing, population about 350, 1½ miles distant,

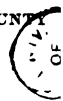
reached by highway. House, 1½ stories, 6 rooms, in good condition. Barn, 26x36, in fair condition. Watered by well. ¼ mile from Lake George. This would be a good location for city boarders. Occupied by owner. Reason for selling, owner wishes to get a farm. Price, \$2,000. Terms, cash, or will exchange for small farm. Address John Bennett, owner, Bolton, N. Y.



FIG. 324.— BUILDINGS ON FARM NO. 12  
COUNTY



FIG. 325.— DAIRY BARN ON FARM NO. 12  
COUNTY





No. 1228.—Farm of 170 acres; located 4 miles from P. O.; 10 miles from railway station at Warrensburg on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Highways, somewhat hilly, but good. Surface of farm, some stone but can mow with machine. Soil, fair. Acres in meadow, 21; in natural pasture, 40; in timber, 109, pine, hemlock and maple. Acres tillable, 30. Fruit, apples and plums. Best adapted to potatoes, corn and oats. Fences, stone wall and wire, fair condition. House, 26x20, new. Outbuildings: barn, 30x46; shed, 30x16; hen house, 13x13. Watered by well, spring and brook. This farm is  $1\frac{1}{2}$  miles from Schroon River and  $4\frac{1}{2}$  miles from Lake George. Occupied by tenant. Reason for selling, owner lives in village. Price, \$2,500. Terms, \$500 down, balance easy. Address Chas. Davis, owner, Bolton Landing, N. Y. Owner will rent.

## TOWN OF CHESTER

Population 1,721

No. 1229.—Farm of 100 acres;  $2\frac{1}{2}$  miles from Chestertown P. O.;  $2\frac{1}{2}$  miles from railway station at Riverside on line of Adirondack R. R.;  $\frac{3}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches. Highways, good, macadamized road. Nearest village, Chestertown, population 600,  $2\frac{1}{2}$  miles distant, reached by highway. Surface, rolling. Soil, sandy loam. Acres in meadow, 35; in natural pasture, 35; in timber, 30, pine, second growth poplar, balsam, tamarack and some hard wood; acres tillable, 50. Fruit, 50 apple trees. Best adapted to potatoes, buckwheat, corn and oats. Fences, rail and board, fair condition. House, 2 stories, 28x30, with wing, in good condition. Barn, 30x40, with sheds, in good condition. Watered by well, also fine spring water comes into house by pump. This is a good place to keep summer boarders; good place on lake front for nearly a mile. Reason for selling, to develop lake front. Price, \$5,000. Terms, cash, or will try to suit purchaser. Address Dr. F. E. Aldrich, owner, Chestertown, N. Y. Owner will rent.

No. 1230.—Farm of 300 acres, located  $2\frac{1}{2}$  miles from Riparius P. O.;  $2\frac{1}{2}$  miles from railway station at Riverside on line of D. & H. Ry.;  $\frac{1}{2}$  mile from school; 2 miles from churches. Highway, good. Nearest village, Saratoga, population 12,693, distant 57 miles, reached by rail or highway. General

surface of farm, rolling and level. Acres in timber, 150 maple and birch; acres tillable, 150. Fruit, 150 apple trees. House, 10 rooms, good condition. Outbuildings, 3. Watered, house, by well; barns, by well; fields, by spring and brook. Occupied by tenant. Reason for selling, death in family. Price, \$6,000. Terms, \$2,000 cash. Horse is included in price. Address Sigrid Blomgren, owner, 285 Lenox Ave., New York City. Will rent with option to buy.

## TOWN OF HAGUE

Population 1,043

No. 1231.—Farm of 150 acres, located 12 miles from railway station at Ticonderoga on line of D. & H. R. R.; R. F. D. passes farm;  $\frac{3}{4}$  mile from school; 2 miles from churches. Highways, in fair condition. Surface of farm, hilly. Soil, sandy loam. Acres in meadow, 20; in natural pasture, 50; balance in timber, soft and hard wood. Acres tillable, 35. Fruit, apples. Best adapted to corn, potatoes and hay. Fences, wire, good condition. House, fair size and condition. Three barns, one 40x40. Watered by springs. Occupied by owner. Reason for selling, advanced age of owner. Price, \$3,000 including stock and tools. Address John Braisted, owner, Silver Bay, N. Y.

No. 1232.—Farm of 200 acres, located 5 miles from P. O.; R. F. D.  $\frac{1}{4}$  mile from farm; 10 miles from railway station at Ticonderoga on line of D. & H. R. R.; 1 mile from school; 5 miles from churches. Highways, hilly. Surface of farm, hilly. Soil, sandy loam. Acres in meadow, 30; in natural pasture, 60; in timber, 100, hard wood, spruce and pine. Acres tillable, 50. Fruit, apples. Best adapted to corn, potatoes and hay. Fences, woven wire. Good house. Three good barns. Watered by spring. Occupied by owner. Reason for selling, advanced age. Price, \$1,500. Address Harold Carpenter, owner, Summit, N. J.

## TOWN OF JOHNSBURG

Population 2,315

No. 1233.—Farm of 320 acres; 3 miles from North Creek P. O. and railway station on line of D. & H. R. R.;  $1\frac{1}{2}$  miles from school, Methodist and Baptist churches; 3 miles from Catholic church. Highways, hilly but in good condition. Surface of farm, fairly level. Soil, clay loam. Acres in meadow, 70; natural pasture, 50; timber, 200, poplar, spruce and hard wood; acres tillable, 100.

Fruit, about 150 apple trees. Best adapted to potatoes, corn, oats and rye. Fences, wire, in good condition. House, 22x30, in good condition. Outbuildings: 3 barns, one 30x40, one 20x60 and one 20x40; ice house, 12x18; hog house, 16x18, all in good condition. Watered by well and brook.  $\frac{1}{2}$  mile from Hudson river. 25,000 white pine trees have recently been planted. Excellent springs on farm. Reason for selling, owner wishes to retire. Price, \$3,500. Terms \$1,000 down, remained secured by mortgage. Owner will sell 110 acres with buildings and orchard for \$1,500 and rent the other lots at reasonable price. Owner will rent for cash. Address Daniel Hurley, owner, 18 Grove ave., Glens Falls, N. Y.

#### TOWN OF LUZERNE

Population 1,185

No. 1234.—Farm of 84 acres, located 4 miles from Luzerne P. O. and 5 miles from railway station at Hadley on line of D. & H. R. R.; 1 mile from school; 4 miles from churches. Highways, hilly. Nearest city, Glens Falls, population 15,243, 14 miles distant, reached by highway. General surface, rolling. Altitude, 650 feet. Nature of soil, light. Acres in meadow, 15; in natural pasture, 15; in timber, 40, pine, hemlock, poplar and hardwood. Acres tillable, 20. Fruit, some apples. Best adapted to corn, hay, oats, potatoes and buckwheat. Fences, fair. House, small, fair condition. Barn, large, fair condition. House watered by well; barns, by well. Hudson river, 1 mile distant. Occupied by tenant. Reason for selling, other business. Price, \$1,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Nathan Pulver, owner, Luzerne, N. Y. Owner will rent.

#### TOWN OF QUEENSBURY

Population 2,667

No. 1235.—Farm of 80 acres; 1 mile from Queensbury P. O.; R. D. 1; 5 miles from railway station at Glens Falls on line of D. & H. R. R.; 1 mile from school and Methodist church; 5 miles from milk station. Highways, good. Nearest city, Glens Falls, population 15,243, 5 miles distant, reached by highway. Surface, sloping to south. Soil, sandy loam. Acres in meadow, 7; natural pasture, 25; timber, 25, chestnut, pine and oak, second growth; acres tillable, 35. Fruit, 20 apple trees. Best adapted to potatoes and fruit. Watered

by well and pond. Fences in poor condition. No buildings except hen house. Reason for selling, owner a woman and cannot attend to farm. Price, \$2,200. Terms, easy. Address Harriet A. Bentley, owner, 11 Pine street, Glens Falls, N. Y. Owner will rent for \$80 per year.

No. 1236.—Farm of 71 acres, located 4 miles from Lake George P. O., R. D. 1; and railway station on line of D. & H. R. R.; 30 rods from school; 3 miles from Presbyterian church; 8 miles from milk station. Highways, somewhat hilly but good. Nearest large village, Lake George, population 632, 4 miles distant, reached by highway. Surface of farm, rolling. Altitude, about 500 feet. Soil, loam. Acres in meadow, 46; in natural pasture, 25. Acres tillable, 46. Fruit, apples, cherries, plums, pears, peaches, grapes, berries and currants. Best adapted to corn, oats, potatoes, hay and garden truck. Fences, rail and wire, good condition. House, 2 stories, slate roof, 10 rooms, good condition. Outbuildings: barn, 26x80, basement, fair condition; wagon house, 20x26; shop, 10x26; hen house. Watered by well, brook and springs. This farm is  $\frac{1}{2}$  mile from Lake George. Occupied by owner. Reason for selling, ill health of owner's wife. Price, \$3,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Chas. A. Dickinson, owner, Lake George, N. Y., R. D. 1, Box 27.

#### TOWN OF STONY CREEK

Population 858

No. 1237.—Farm of about 100 acres, located  $\frac{1}{4}$  mile from West Stony Creek P. O.; 13 miles from Stony Creek on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school; 4 miles from churches. Highways, good country road. Nearest village, Warrensburgh, 20 miles distant, reached by rail and highway. Acres in meadow, 35; in pasture, 65; in timber, 8 or 10, pine and poplar. Acres tillable, 35. Fruit, few apple trees. Best adapted to potatoes, corn, buckwheat and strawberries. Fences, wire, in good condition. House, 16x19; wing, 16x19; back kitchen, good condition. Outbuildings: barn, 20x30, basement under half, good condition, ice house, sheds and poultry house. House and barn watered by driven well. Fields watered by well and springs. Reason for selling, old age of owner. Price, \$1,700. Terms, one-half cash, balance on mortgage. Address Martin V. B. Coon, owner, Stony Creek, N. Y.

## WASHINGTON COUNTY

Area, 861 square miles. Population, 47,778. Annual precipitation, 35.6 inches. Annual mean temperature, 46.2°. Number of farms, 3,564. County seat, Hudson Falls.

This county is located in the eastern part of the state bordering on Vermont. Lake George bounds the county on the northwest and the Hudson River on the west. It is drained by the Hoosic, Pawlet and Poughkeepsie Rivers and by the Battenkill and Weed Creeks. Lake Champlain forms a part of the eastern boundary of the county.

The surface is hilly and mountainous. Along the eastern border extends a range of high hills composed wholly of shale, sand and clay. These hills by the action of rain and weather have deposited a rich deep loam in the valleys and lower uplands. The fertility of this rich loam is constantly being renewed by this same weather agency. Forests of beech, elm, sugar maple, spruce and hemlock and other trees cover a large part of the county. Among its minerals are iron ore, graphite, slate and water lime. The staple crops of the county are exceedingly good, being corn, 597,342 bushels; oats, 659,913 bushels; buckwheat, \$52,264 bushels; rye, 70,016 bushels; potatoes, 1,375,013 bushels; hay and forage, 121,417 tons; considerable flax is also grown in the county. The value of all farm property is \$18,459,934, showing a marked increase over the value of 1900. The average price of improved land is \$31.20 per acre. There are reported, dairy cows, 28,169; horses, 10,070; swine, 12,859; sheep, 36,752; poultry, 167,477; production of milk, 13,521,120 gallons; total receipts from the sale of dairy products, \$1,327,575.

The county is intersected by branches of the Delaware and Hudson railroad and by the Champlain canal. Whitehall is the principal town of the county and has large manufacturing interests, which use large quantities of lumber. There are 224 school districts in the county; 31 miles of state roads and 1,370 miles of graded and improved highways. Twenty-one milk stations and factories take care of the milk interests of the county and 21 agricultural organizations contribute to the agricultural and farming interests.

## TOWN OF CAMBRIDGE

Population 1,694

No. 1238.—Farm of 29 acres, located 1 mile from Buskirk P. O., R. D. No. 1 and railway station on line of Boston & Maine R. R.; 1 mile from school and churches; 1 mile from butter and cheese factory and milk station. Nearest village, Hoosick Falls, population 5,532, 7 miles distant, reached by rail or good highway. Nature of soil, gravel and sand loam. Acres in meadow, 23; in pasture, 6; in timber, 2, pine and hemlock; acres tillable, 20. Fruit, 40 apple trees, 6 pears, 15 plums, strawberries and raspberries. Best adapted to general farming. Fences, mostly wire, good condition. House, 10 rooms, bungalow style. Out-buildings: barn 22x32, with basement and stanchions for 8 cows, shed with box stall and hayloft. House watered by running water; barn by running water. Hoosick river 1 mile distant. Occupied by owner. Reason for selling, ill health. There is also a small tenant house on farm. Price, \$3,000. Terms, part cash, balance on mortgage. Address J. H. White, owner, Buskirk, N. Y.

## TOWN OF DRESDEN

Population 582

No. 1239.—Farm of 200 acres, located 1/2 mile from Dresden P. O. and 2 1/2 miles from railway station on line of D. & H. R. R.; 3 miles from school; 3 miles from churches and 4 miles from condensing plant. Highways, good. Nearest village, Whitehall, population 4,917, 3 1/2 miles distant, reached by highway or water. General surface, level and rolling. Nature of soil, mostly clay. Acres in meadow, 50; in natural pasture, 40; in timber, 110, all kinds. Acres tillable, 50. Fruit, apples. Best adapted to hay, oats and corn. Fences, fair condition. House, good sized, good condition. Barn not very good. House and barns watered by brook and spring and fields, by South Bay. This farm is situated on Lake Champlain and South Bay. Occupied by tenant. Reason for selling, owner has two farms. Price, \$3,500. Terms, cash. Address H. A. Barber, owner, Clemons, N. Y.

No. 1240.—Farm of 233 acres, located 1 mile from Clemons P. O., 2 1/4 miles from railway station on line of D. & H.

R. R.;  $\frac{1}{2}$  mile from school;  $1\frac{1}{4}$  miles from Baptist church, and 4 miles from milk station. Highways, good. Nearest city, Whitehall, population 4,917,  $2\frac{1}{4}$  miles distant, reached by rail or highway. General surface, hilly, rolling and some level. Nature of soil, loam. Acres in meadow, 30; in natural pasture, 100; in timber, 103, pine, hemlock and poplar. Fruit, apples. Best adapted to potatoes and gardening. Fences, good. Two houses, good sized, fair condition. Barn in fair condition. House watered by brook and spring; barns, by brook and fields, by brook. Occupied by owner. Reason for selling old age. Price, \$3,000. Terms, cash. Address C. J. Holcomb, owner, Clemons, N. Y. Owner will rent with option to buy.

No. 1241.—Farm of 245 acres, located 3 miles from Clemons P. O.; 6 miles from railway station on line of D. & H. R. R.; 2 miles from school; 3 miles from Baptist church, and 6 miles from milk station. Highways, hilly but good. Nearest village, Whitehall, population 4,917, 10 miles distant, reached by rail and highway. General surface, rolling and hilly. Nature of soil, loam. Acres in meadow, 15; in natural pasture, 150; in timber, 80, poplar, hardwood, etc. Fruit, apples. Best adapted to potatoes and gardening. Fences, fair. House in good condition. Barn in good condition. House watered by spring; barns, by brook and fields, by brook. Reason for selling, to settle an estate. Price, \$2,000. Terms, cash. Address Mrs. L. W. Barber, owner, Clemons, N. Y.

#### TOWN OF GRANVILLE

Population 6,434

No. 1242.—Farm of 50 acres, located at West Granville; 4 miles from railway station at Comstock on line of D. & H. R. R.; 1 mile from school; 1 mile from churches;  $\frac{1}{2}$  mile from butter factory;  $\frac{1}{2}$  mile from cheese factory; 4 miles from milk station and condensing plant. Highways, extra good. General surface, level. Nature of soil, sand and clay loam. Acres that can be used as meadow, all; in timber, 12, hard and soft. Acres tillable, all. Fruit, a few trees. Best adapted to potatoes, corn, grain and fruit. Fences, wire. House, 12 rooms, with fire places. Outbuildings: barn 30x35, with shed and granary, all in good condition. House watered by well; barns, by well and fields, by springs. Kettowee river, 1 mile distant. Occupied by owner. Reason for selling,

old age. Price, \$3,400. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address James Hills, owner, West Granville, N. Y., or Barden Realty Co., brokers, Granville, N. Y.

No. 1243.—Farm of 90 acres, located  $2\frac{1}{2}$  miles from Middle Granville P. O. and railway station on line of D. & H. R. R.; 1 mile from school;  $2\frac{1}{2}$  miles from churches; 1 mile from cheese factory;  $2\frac{1}{2}$  miles from milk station;  $3\frac{1}{2}$  miles from condensing plant. On milk route for condensing plant. Highways, good. General surface, level and some rolling. Nature of soil, slate and clay loam. Acres that can be used as meadow, 60; in natural pasture, 25; in timber, 5, hard and soft wood. Acres tillable, 65. Best adapted to grain, potatoes and corn. Fences, wood and wire. House,  $1\frac{1}{2}$  stories with 7 rooms. Two barns. House watered by well; barns, by well and fields, by springs. Lake St. Catherine, 6 miles distant. Occupied by owner. Reason for selling, other business. Price, \$2,250. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address George Aldons, owner, Middle Granville, N. Y., or Barden Realty Co., brokers, Granville, N. Y.

No. 1244.—Farm of 124 acres, located 5 miles from Middle Granville P. O., R. D. No. 1, and railway station on line of D. & H. R. R.; 1 mile from school; 5 miles from churches; 1 mile from cheese factory; 5 miles from milk station and 6 miles from condensing plant. On Borden's milk route. Highways, good. General surface, level and rolling. Nature of soil, slate and clay loam. Acres that can be used as meadow, 75; in natural pasture, 40; in timber, 10, hard wood. Acres tillable, 75. Fruit, 3 old apple orchards. Best adapted to fruit, grain, corn and potatoes. Fences, mostly rail, fair condition. House, 8 rooms, in good condition. Outbuildings: cow barn 26x36, horse barn, carriage shed, open shed, granary and corn house. House watered by well; barns, by well and fields, by springs. Occupied by tenant. Reason for selling, owner has retired. Price, \$1,750. Terms, cash. Address, Mrs. Louisa Parks, owner, Hartford, N. Y., or Barden Realty Co., brokers, Granville, N. Y.

No. 1245.—Farm of 186 acres, located 1 mile from Granville P. O., R. D. No. 1, and railway station on line of D. & H. R. R.;  $\frac{1}{4}$  mile from school;  $\frac{3}{4}$  mile from churches; 1 mile from butter fac-

tory; 1 mile from cheese factory; 1 mile from milk station and condensing plant. Highways, good, state road. General surface, mostly level, some rolling. Nature of soil, loam, very fertile and productive. Acres that can be used as meadow, 125; in natural pasture, 40; in timber, 20, mostly hard wood. Acres tillable, 125. Best adapted to fruit, grain, vegetables and dairying. Fences, mostly wire in good condition. Two houses, 1 with 20 rooms, tenant house of 6 rooms. Outbuildings: several barns and other buildings, in good condition. Will accommodate 40 cows and 10 horses. House watered by gasoline pump; barns, by gasoline pump and fields, by river and springs. Indian river runs through farm. Lake Catherine, 5 miles distant. Occupied by owner and tenant. Reason for selling, wishes to retire. Price, \$12,500. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address I. M. Barden, owner, Granville, N. Y., or Barden Realty Co., brokers, Granville, N. Y.

No. 1246.—Farm of 83 acres, located 3 miles from Granville P. O., R. D. No. 1, and railway station on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school; 3 miles from churches; 3 miles from butter factory; 3 miles from cheese factory; 3 miles from milk station and condensing plant. On milk route to these plants. Highways, good. General surface, level. Nature of soil, sandy loam. Acres that can be used as meadow, 15; in natural pasture, 20; in timber 8, hard and soft. Acres tillable, 55. Fruit, a few apple, pear and cherry trees. Best adapted to fruit, vegetables, grains, corn and potatoes. Fences, wire and rail, fairly good condition. House, 2-stories, 8 rooms, slate roof. Barns, ample, good condition. House watered by well; barns, by well, and fields, by springs. Reason for selling, wishes to retire. Price, \$2,650. Terms, \$1,500 cash, balance on mortgage. Address, John Smith, owner, Granville, N. Y., or Barden Realty Co., brokers, Granville, N. Y.

## TOWN OF GREENWICH

Population 4,227

No. 1247.—Farm of 184 acres, located 1 mile from East Greenwich P. O., and railway station on line of D. & H. R. R.; 1 mile from school and churches; 2 miles from cheese factory and 1 mile from milk station. Highways, good, mostly State road. Nearest large vil-

lage Salem, population 1,250, 5 miles distant, reached by rail or highway. Surface, rolling. Soil, heavy loam. Acres that can be used as meadow, 80; in timber, 12, pine and hemlock. Acres tillable, 160. Fruit, 75 apple, 6 plum trees, grapes and currants. Best adapted to general crops. Fences, stone and wire, in good condition. House, 12 rooms, 45x30, in fine condition. Outbuildings: barn 36x50, hay barn 30x26, shed 51x30, hog house, wagon house, cow stable, 24 stanchions. Watered; house by cistern and well, barns by brook, fields by brook and springs. McDougal Lake borders on farm. Occupied by owner. Reason for selling, ill health of owner. Price, \$44 per acre. Terms,  $\frac{1}{2}$  cash. This is a good dairy or stock farm. Address John H. Carr, owner, East Greenwich, N. Y. Owner will rent on shares.

No. 1248.—Farm of 300 acres, 2 miles from Greenwich P. O. and railway station on G. & J. R. R.; R. D. 1 from Greenwich. Highways, good. Soil, gravel and slate loam. Acres in meadow, 75; tillable, 175; timber, 50. Fruit, a large variety of good fruit. Adapted to general farming. Altitude, high and healthful. Fences, stone, patent rail and wire, in fair condition. House, 50x30, in good condition, bath room, hot and cold water, newly painted; good tenant house, 3 barns, 32x40 each; enlarged 1 barn, 38x30, in fair condition; good horse barn; new underground cow stable, 36x85, concrete floor, for 40 cows; new silo. Watered, house, barns and fields, by running water and springs. This farm is considered a fine stock farm. Price, \$10,000. Terms, reasonable. Owner will sell 200 acres with buildings for \$7,000. Address John Wilson, Jr., owner, Greenwich, N. Y., R. D. 1. Owner will rent.

No. 1249.—Farm of 50 acres, located 4 miles from Greenwich P. O. and railway station;  $\frac{1}{2}$  mile from school; 4 miles from butter factory; 4 miles from milk station; milk collected at door. Highway, good. Nearest villages, Greenwich, population 2,314, Cambridge, 1,528, distance 4 miles to each, reached by highway. General surface of farm, level and sloping. Altitude, 300 feet. Nature of soil, loam. Acres in meadow, 10; timber, 10, pine, birch and chestnut. Fruit, 2 pear, 3 plum, 8 cherry and 25 apple trees and raspberries. Best adapted to all crops; good dairy and hay farm. House, 9 rooms. Outbuildings: wagon

house, large barn, poultry house and corn crib. Watered, house and barn, by spring; fields, by brook and springs. Hudson river, 3 miles distant. Occupied by owner. Price, \$2,100. Terms, part cash. Stock, consisting of team, 3 good cows, poultry, etc., will be included; also the corps, tools, wagons and implements. Address O. P. Dorr, owner, R. D., Greenwich, N. Y., or W. B. Vail, agent, 469 State St., Schenectady, N. Y.

No. 1250.—Farm of 260 acres, located  $2\frac{1}{2}$  miles from Greenwich P. O. and railway station on line Greenwich and Johnsonville branch of the D. & H. R. R.;  $2\frac{1}{2}$  miles from school and churches. Highways, state road. General surface of farm, level. Nature of soil, dark loam. Acres in meadow, 200; in pasture, 20; in timber, 20; acres tillable, 200. Fruit, for home use. Best adapted to corn, oats, rye, potatoes and vegetables. House, 2 stories, good condition. Outbuildings, 2 large barns, 1 small one, good condition. House and barns watered by springs; fields, by Battenkill river, which forms north boundary of farm. Reason for selling, to close estate. Price, \$8,000. Terms, reasonable. Address L. G. Thompson, owner, Greenwich, N. Y.

No. 1251.—Farm of 106 acres;  $1\frac{1}{2}$  miles from Greenwich P. O., R. D. 5;  $1\frac{1}{2}$  miles from railway station at Greenwich on line of B. & M. R. R.;  $\frac{1}{4}$  mile from school;  $1\frac{1}{2}$  miles from churches, butter and cheese factory and milk station. Highways, good. Nearest village, Greenwich, population, 2,314,  $1\frac{1}{2}$  miles distant, reached by rail and highway. Surface, level and rolling. Soil, sand and clay loam. Acres in meadow, 25; natural pasture, 20; timber, 5, pine and hardwood; acres tillable, 90. Fruit, choicest kind, young trees, bearing 4 years. Best adapted to potatoes, corn, oats and rye. Fences, stone wall and wire, in good condition. Brick house, 48x36, 2 stories, slate roof, 4 cellars, woodshed attached. Outbuildings: 3 barns, 1, 30x40; 1 large cow barn, 1 new barn, holds 30 tons of hay; large ice house; carriage house, hog pen, suitable for 50 hogs; corn house, in good repair. Watered by wells, springs and cistern. Occupied by owner. There is a building that has been used for meat market which could be used as tenant house; also slaughter house suitable for barn. Reason for selling, poor health of owner. Price, \$5,000. Terms, cash. Address O. S. Platt, owner, Greenwich, N. Y., R. D. 5. Owner will rent.

No. 1252.—Farm of 260 acres;  $2\frac{1}{2}$  miles from Greenwich P. O., R. D. 3;  $2\frac{1}{2}$  miles from railway station at Greenwich on line of G. & J. R. R.;  $\frac{3}{4}$  mile from school;  $2\frac{1}{2}$  miles from churches, butter factory, cheese factory and milk station. Highways, State road to Greenwich,  $\frac{1}{4}$  mile from house. Surface of farm, rolling and level. Acres in meadow, 10; in natural pasture, 40; in timber, 20; acres tillable, 200. Best adapted to corn, oats, rye, potatoes, etc. Fences, in fair condition. House, large, 2 stories, good condition. Outbuildings: 2 large barns and 1 small barn. Watered by spring and brook. Battenkill river, on edge of farm. Occupied by tenant. Reason for selling, to close an estate. Price, \$8,000. Terms, mostly cash. Address L. G. Thompson, owner, Greenwich, N. Y.

No. 1253.—Farm of 300 acres, located 1 mile from E. Greenwich P. O.; 1 mile from railway station at E. Greenwich on line of G. & J. R. R.; 1 mile from school; 4 miles from churches; 1 mile from cheese factory and milk station; 8 miles from milk condensing plant. Highways in good condition. Nearest large village, Salem, population 1,250, 4 miles distant, reached by rail and highway. Surface, of farm, rolling. Soil, slate loam. Acres in meadow, 60; in timber, 15, pine, chestnut, maple and hemlock. All tillable except woodland. Fruit, apples, pears, plums and cherries. Best adapted to potatoes, corn and grain. Fences, stone wall and wire. House, 12 rooms, 2 stories, brick, good condition. Outbuildings: horse barn, 30x36; 3 hay barns, 36x50, with basement; silo; modern class barn, 30x60. Watered by running water, brook, spring and lake. Occupied by owner. Reason for selling, ill health. Price, \$9,000. Terms, cash. Address D. M. Connor, owner, East Greenwich, N. Y. Owner will rent.

#### TOWN OF HARTFORD

Population 1,216

No. 1254.—Farm of 63 acres, located  $2\frac{1}{2}$  miles from Smiths Basin P. O., R. D. No. 1, and railway station on line of D. & H. R. R.;  $\frac{1}{2}$  mile from school;  $2\frac{1}{2}$  miles from churches;  $2\frac{1}{2}$  miles from butter factory;  $2\frac{1}{2}$  miles from cheese factory and milk station. Highways, good. Nearest village, Hudson Falls, population 5,189, 8 miles distant, reached by highway. Nature of soil, slate loam. Acres in meadow, 25;

in natural pasture, 10; in timber, 3, hemlock, beach and maple. Acres tillable, 55. Fruit, apple, plum, pear and cherry trees. Best adapted to corn, rye, oats and potatoes. Fences, wire, rail and board. House, in good condition. Outbuildings: barn 42x30 with wing for horses and cows, shed 25x18, corn house with wing and basement for wagons and tools, large grain barn, all slate roof excepting hog house and poultry house. House and barns watered by well; fields, by springs. Occupied by owner. Reason for selling, ill health. Price, \$2,400. Terms, cash. Would leave \$1,000 on mortgage. Address Thomas McCall, owner, Smiths Basin, N. Y.

#### TOWN OF HEBRON

Population 1,505

No. 1255.—Farm of 100 acres, 5 miles from West Hebron P. O., R. D. 2; 9 miles from railway station on line of D. & H. R. R.; 1 mile from school; 2½ miles from Presbyterian church; 1½ miles from butter factory and cheese factory; 8 miles from milk station; 9 miles from milk condensing plant. R. D. passes farm. Highways, rolling but good. Nearest village, West Hebron, population, 500, reached by highway. Surface of farm, rolling. High altitude. Soil, slate and loam. Acres in meadow, 15; in timber, 20, hard wood, oak and chestnut; acres tillable, 60. Fruit, apples, plums, pears and grapes. Best adapted to potatoes, oats and rye. Fences, wire, rail and stone, good condition. House, 5 rooms, large pantry, clothes closet and hall. Outbuildings: new barn, 32x42, slate roof, basement. Watered, house by well; barns and fields, by springs. Land is worked on shares; house is not occupied. Reason for selling, owner has another farm. Price, \$1,800. Terms, ¼ cash. Address John A. Dennison, owner, Salem, N. Y. Owner will rent with option to buy.

No. 1256.—Farm of 132 acres, located ½ mile from Porter P. O. and 4 miles from railway station at W. Pawlet, Vt. on line of D. & H. R. R.; 1 mile from school; ½ mile from cheese factory; 4 miles from milk station and 7 miles from condensing plant. Highways, State road. General surface, level and some rolling. Nature of soil, slate loam. Acres that can be used as meadow, 80; in natural pasture, 40; in timber, 12, hard and soft, mostly second growth. Acres

tillable, 80. Best adapted to grain, potatoes and corn. Fences, wire and wood, fair condition. House, 1½ stories, 7 rooms. Two barns. House watered by well; barns, by well and fields, by springs. Occupied by tenant. Reason for selling, other business. Price, \$2,300. Terms, ½ cash, balance on mortgage. This property is sold subject to slate quarry rights. Address John McDonough, owner, West Pawlet, Vt., or Barden Realty Co., brokers, Granville, N. Y.

No. 1257.—Farm of 200 acres, located 6 miles from West Pawlet, Vt., P. O., R. D. No. 2, and railway station, on line of D. & H. R. R.; ½ mile from school; 3 miles from church; ½ mile from cheese factory; 9 miles from condensing plant. Highways, good. General surface, level and rolling. Nature of soil, clay and slate loam. Acres that can be used as meadow, 100; in natural pasture, 65; in timber, 25, hard and soft, 1st and 2d growth. Acres tillable, 110. Fruit, 2 apple orchards, 1 about 18 years old and one about 35 years old, about 200 trees or more. Best adapted to fruit, potatoes, corn and grain. Fences, rail and wire, fair condition. House, brick, in good condition. Barn 30x40, fair condition. House watered by well; barns, by well; fields, by springs. Lily pond ½ mile distant. Occupied by tenant. Reason for selling, other business. Price, \$2,500. Terms, \$1,500 cash, balance on mortgage. Address A. B. Walter, owner, Granville, N. Y., or Barden Realty Co., brokers, Granville, N. Y.

No. 1258.—Farm of 100 acres, 3 miles from Salem; R. D.; 15 acres of timber; balance tillable land, good for hay, grain and stock raising. Large house, in fair repair. Good barn. Well watered. Fairly well fenced. Price, \$2,000. Terms, to suit purchaser. Address Abner Robertson, owner, Salem, N. Y. Owner will rent.

#### TOWN OF JACKSON

Population 985

No. 1259.—Farm of 115 acres; located 4 miles from Cambridge P. O., R. D. 1; 2 miles from railway station at Shushan on line of D. & H. R. R.; ½ mile from school; 2 miles from churches; 4 miles from butter and cheese factory, milk station and condensing plant. Population of Cambridge, 1,528, reached by State highway. General surface of farm, hilly. Altitude, 550 feet. Acres in meadow, 65; in pasture, 40; in

timber, 10. Acres tillable, 105. Fruit, 450 apple trees, variety, 12 pears, plums and cherries. Best adapted to corn, potatoes, oats and rye. Fences, wire, good condition. House, 40x60. Outbuildings: cow barn 40x60, horse barn 40x35, shed 40x20. House and barns watered by running water from spring; fields, by spring and brook. Occupied by owner. Reason for selling, other business. Price, \$10,000. Address William Balis, owner, R. D. 1, Cambridge, N. Y.

## TOWN OF SALEM

Population 2,780

No. 1260.— Farm of 187 acres, 4 miles from Shushan; R. D. 4 miles from Salem. Good stock and grain farm. 10 acres timber. 1½-story house, 40x27, with wing, 16x30, very comfortable and in good repair. Two barns, 26x48; woodshed, 30x20, both good. ½ mile trout brook. Well watered and fenced. Very cheap at price asked, \$2,500. Easy terms. Address Patrick Hughes, owner, Shushan, N. Y., R. D. Owner will rent with option to buy.

No. 1261.— Farm of 264 acres, located 3 miles from Salem P. O., R. D., and railway station on line of Delaware & Hudson R. R.; ½ mile from school; 2½ miles from churches; 3 miles from butter factory and milk station; 4 miles from cheese factory. Highways, good. Nearest village, Salem, population 1,250, reached by highway. General surface of farm, rolling. Nature of soil, loam and slate. Acres in meadow, 190; in timber, 40, oak, ash, beech and maple; acres tillable, 215. Fruit, 50 apple and 20 cherry trees. Best adapted to corn, oats, rye, potatoes, wheat and buckwheat. Fences, wire and stone. House, large, 10 rooms, painted, good condition. Outbuildings, large barn, cow barn and shed, 90 feet long; horse barn and 6 other good buildings. Reason for selling, ill health of owner. Price, \$7,000. Terms, ¼ cash. Address D. M. Safford, owner, Salem, N. Y.

No. 1262.— Farm of 350 acres, located 1 mile from West Rupert, Vt., P. O., and railway station on line of D. & H. R. R.; 1 mile from school; 1 mile from churches; 1 mile from butter factory; 1 mile from cheese factory and milk station and 11 miles from condensing plant. Nearest village, Salem, population 1,250, 6 miles distant. Reached by rail and highway. General surface, level. Nature of soil, loam and very productive. Acres that can be used as meadow, 150;

in natural pasture, 50; in timber, 150, hard and soft, 1st and 2d growth. Acres tillable, 150. Fruit, 75 apple trees, a few pears and cherries. Best adapted to fruit, grains, potatoes and corn. Fences, mostly wire in good condition. House, large, 18 rooms, heated by hot water, baths and running water. Seven barns in fine shape. House watered by gasoline engine pump; barns, by piped springs; fields, by springs. Batterkill river runs through farm. Occupied by owner. Reason for selling wishes to retire. Price, \$20,000. Terms, easy. Price includes personal property of a value of \$5,000. Would make a fine estate. Address Schuyler Sherman, owner, West Rupert, Vt., or Barden Realty Co. brokers, Granville, N. Y.

No. 1263.— Farm of 160 acres, located 3 miles from Salem P. O., R. D. and railway station on line of D. & H. R. R.; 3 miles from churches, 2½ miles from cheese factory and 3 miles from milk station. Highways, good, but somewhat hilly. General surface, rolling. Nature of soil, loam. Acres in meadow, 20; in natural pasture, 20; acres tillable, 110. Best adapted to oats, corn, rye, potatoes and buckwheat. Fences, wire, stone and board. House, brick in fair condition. House watered by well; barn, by stream. Occupied by tenant. Reason for selling other business. Price, \$3,000. Terms, easy. Address Mrs. Eliza A. Bullis, owner, Salem, N. Y., or Abner Robertson, broker, Salem, N. Y.

No. 1264.— Farm of 233 acres: 1 mile east of Shushan, N. Y. This was originally 2 farms and could be divided very easily if desired, as there are ample buildings on each part. On the south portion is a tenant house and barn; on the north portion is the family dwelling, which is a large 2-story building with piazzas, also a number of barns. Each portion has a fine wood lot and plenty of running water. The south boundary line is the Battenkill river. Owner prefers to sell all together, but would divide if necessary. Land in good condition; well fenced and easily worked by all kinds of farm machinery. For price and terms, address S. A. Benninger, owner, Shushan, N. Y.

No. 1265.— Farm of 360 acres, located 3½ miles from Salem P. O. and railway station on line of D. & H. R. R.; 1½ miles from school; 3½ miles from butter factory, milk station, Catholic and Protestant churches; 2½ miles from cheese factory. Highways, somewhat



hilly but good. Surface of farm, meadows, level; pasture, rolling. Altitude about 490 feet. Soil, loam. Acres in meadow, 100; in natural pasture, 40; in timber, 30, oak, hickory, basswood and maple. Acres tillable, 190. Fruit, apples. Best adapted to hay, oats, corn, potatoes, etc. Fences, stone wall and wire, good condition. House, 28x62, 14 rooms, house, 26x48, 11 rooms, both in good condition. Outbuildings: cow barn,

33x48 with 100 ton silo; cow barn, 30x54; horse barn; corn barn; hen house; need some repairs. Watered by well, cistern, springs and creek. Creek runs through farm. Occupied by owner. Price, \$10,000, includes stock and tools. Terms, \$3,000 down, remainder on mortgage. Will sell farm, stock and tools for \$8,000. Address Chas. Fleming, owner, Salem, N. Y., Box 151.

### WAYNE COUNTY

Area, 621 square miles. Population, 50,179. Annual precipitation, 41.36 inches. Annual mean temperature, 50°. Number of farms, 5,237. County seat, Lyons.

This is one of the north tier counties bordering on Lake Ontario and is drained by the Clyde River and Mud Creek, which unites with the Canandaigua outlet at Lyons.

The surface is undulating and diversified with long, low and parallel ridges running north and south. There are considerable woodlands of beech, ash, hickory, elm, oak, sugar maple and other trees covering about one-sixth of the county. Excellent building stone, iron ore and gypsum are found. The soil is of the same general nature as the other counties bordering on Lake Ontario, except that in the level strip along the lake where clay and gravelly loam appear in about equal quantities. In the eastern half of the county on both sides of, and including the Clyde River Valley, black dirt with occasional areas of dark, gravelly loam is found. In the western half along the Mud creek valley and south to the county line the soil is composed of sandy and gravelly loam. The crops reported are corn, 911,653 bushels; wheat, 337,333 bushels; barley, 70,000 bushels; dry beans, 79,422 bushels; potatoes, 1,049,202 bushels; hay and forage, 104,117 tons. About 50,000 bushels of buckwheat and rye were also produced. The value of all farm property is \$34,481,902, an increase over that of 1900 of 45.7 per cent. Domestic animals are reported as follows: Dairy cows, 20,645; horses, 15,373; swine, 20,749; sheep, 24,587; poultry, 343,400; production of milk, 9,930,245 gallons valued at \$875,893.

The county is traversed by the Erie (Barge Canal), the New York Central and Hudson River; West Shore; Rome, Watertown and Ogdensburg, and Northern Central railroads. There are also electric lines extending in the various directions throughout the county. Lyons, the principal city of this county, contains flour mills, distilleries, barrel manufactories and extensive beet sugar factories. Ample markets for everything produced in this county are near at hand in the cities of Rochester, Syracuse, Buffalo, etc.

There are 209 district schools in the county, 26 miles of state and county roads and 552 miles of other improved highways; 26 milk stations are conveniently located throughout the county. One Pomona grange; 20 subordinate granges; a fair association; a union agricultural society; county fire relief association; county agricultural society, county fruit growers' association and the Williamson Fruit Growers' Association constitute the different farmers' associations of the county.

#### TOWN OF BUTLER

Population 1,610

No. 1266.—Farm of 225 acres, located 4½ miles from Red Creek P. O., and railway station on line of R., W. & O. R. R.; 1 mile from school; 2½ miles from Methodist church; 2½ miles from butter factory; 5 miles from cheese factory and 4½ miles from milk station. Highways, fairly good. General surface, rolling. Altitude, 500 feet. Nature of soil, gravelly loam. Acres in

natural pasture, 10; in timber, 20; beech, maple, ash, elm and soft maple. Acres tillable, 160. Best adapted to wheat, corn, oats, barley, buckwheat and alfalfa. Fences, wire, fair condition. House, 9 rooms, good condition; two large barns, good condition. House watered by well; barns, by well and springs; fields, by springs. Occupied by tenant. Price, \$25 per acre. Address Guy Washburn, owner, Wolcott, N. Y.

## TOWN OF GALEN

Population 4,630

No. 1267.—Farm of 200 acres, 2 miles from Clyde P. O. and railway station on line of the N. Y. C. & H. R. R. R.;  $\frac{1}{2}$  mile from school; 2 miles from churches of all denominations; 2 miles from butter factory; on State highway. Nearest village, Clyde, population, 2,695, distant 2 miles, reached by highway and trolley. Surface, rolling. Soil, gravel. 20 acres of meadow; 20 acres of natural pasture; 10 acres of timber, beech and maple; 150 acres are tillable. Large fruit orchard of 1,500 apple and 100 peach trees. Land is adapted to all kinds of crops. Fences, in good condition. Large brick house, in good condition. 3 barns of large size; 2 hog houses; 1 stone storage building, 26x46x16. House is watered by well; barns, by well; fields, by spring and river. Clyde river adjoins property on the west. Occupied by owner. Reason for selling, owner would like to retire. Price, \$16,000. Terms, \$4,000 down and balance on time. Owner will rent with option to buy. Address F. L. Waldorf, owner, Clyde, N. Y.

No. 1268.—Farm of 208 acres, located 4 miles from Clyde P. O., R. D., and railway station on lines of N. Y. C. & W. S. R. Rs.;  $\frac{1}{2}$  mile from school; 4 miles from churches; 4 miles from butter factory and cheese factory. Highways, good. General surface, rolling. Nature of soil, sandy loam. Acres in meadow, 50; in timber, 15, beech and maple. Acres tillable, 185. Fruit, 800 trees. Best adapted to wheat, barley, corn and oats. Fences, woven wire, in good condition. House, 9 rooms, in good condition. 3 large barns. House and barns watered by well; fields, by springs. Occupied by tenant. Price, \$11,000. Terms,  $\frac{1}{2}$  cash, balance on mortgage. Address Mrs. David Finch, owner, Clyde, N. Y. Owner will rent.

No. 1269.—Farm of 62 acres, located 2 miles from Clyde P. O., R. D. and railway station on lines of N. Y. C. & W. S. R. Rs.;  $\frac{1}{4}$  mile from churches; 2 miles from cheese factory; 2 miles from milk station and condensing plant. Highways, good. General surface, level. Nature of soil, black loam. Acres in meadow, 20; acres tillable, 62. Fruit, 200 apple trees, peaches, pears and plums. Best adapted to all kinds of crops. Fences, woven wire, good condition. House, in good condition. Two barns, in

good condition. House, barns and fields watered by wells. Occupied by owner. Reason for selling, ill health. Price, \$6,000. Terms, \$2,000 cash, balance on mortgage. Address Chauncey Harper, owner, Clyde, N. Y.

No. 1270.—Farm of 200 acres, located 3 miles from Clyde P. O., R. D. and railway station on lines of N. Y. C. & W. S. R. Rs.;  $2\frac{1}{2}$  miles from school and churches; 3 miles from butter factory, cheese factory and milk station. Highways, State road. Nearest village, Clyde, population 2,695, 3 miles distant, reached by highway and trolley. General surface, rolling. Nature of soil, good. Acres in meadow, 20; in natural pasture, 20; in timber, 10, beech and maple. Acres tillable, 150. Fruit 1,500 trees, all varieties. Best adapted to corn, wheat, barley and grain. Fences, woven wire. Large brick house in good condition. Outbuildings: 3 barns, large size, 2 hog houses, 1 stone storage building 26x46x16. House and barns watered by well; fields, by spring and river. Occupied by owner. Reason for selling, wishes to retire. Price, \$16,000. Terms, \$4,000 cash, balance on mortgage. Address Frank L. Waldorf, owner, Clyde, N. Y. Will rent with option to buy.

## TOWN OF HURON

Population 1,531

No. 1271.—Farm of 130 acres, located 3 miles from North Rose P. O. and railway station on line of R., W. & O. R. R.;  $\frac{3}{4}$  mile from school; 3 miles from churches. Highways, State road. General surface, rolling. Acres in natural pasture, 11; in timber, 10. Acres tillable, 110. Fruit, 200 Baldwin, 260 Spies, 800 McIntosh, 250 Dutchess, 500 Greenings, 25 Hubbardston apple trees, 1,200 pears of standard varieties, 150 cherry, 40 prune and 20 peach trees. Best adapted to all kinds of fruit and general farm crops. Fences, wire in good condition. House, 10 rooms, modern improvements, good 8-room tenant house. New gambrel roof barn 66x36 with basement, several other buildings. House watered by well and cistern; barns by well.  $\frac{1}{2}$  mile frontage on Soodus Bay. Occupied by owner. Reason for selling, wishes to retire. Price, \$24,000. Terms, \$8,000 cash, balance on mortgage at 5%. Address George L. Deady, owner, North Rose, N. Y., or C. I. DeZutter, broker, Williamson, N. Y.

TOWN OF MACEDON

Population 2,355

No. 1272.—Farm of 126 acres, located 3 miles from Macedon P. O. and railway station on lines of N. Y. C. R. R., and R., S. & E. Trolley; 3 miles from high school;  $\frac{3}{4}$  mile from district school; 3 miles from churches and milk station. Highways, good. General surface, rolling. Nature of soil, gravelly loam and 4 acres of much. Acres in meadow, 18; in timber, 8, 2nd growth. Acres tillable, 110. Fruit, 4 acres of apples, small fruit for home use. Best adapted to potatoes and general farming. Fences, good, mostly wire. House, 2 stories, 10 rooms, concrete cellar, good condition. Outbuildings, basement barn 30x60, with gambrel roof, having 18 swing stanchions, lean-to 20x24, silo 14x30, ice house, hog house and poultry house. House watered by well; barns, by well, and fields, by spring and wells. Occupied by owner. Reason for selling, wishes a smaller place. Price, \$10,500. Terms, \$3,300 cash, balance on mortgage at 5%. E. W. Hettler, owner, Macedon, N. Y., or Garfield Real Estate Company, brokers, Rochester, N. Y.

TOWN OF MARION

Population 2,102

No. 1273.—Farm of 104 acres, located 4 miles from Marion P. O., and railway station on line of N. & M. R. R.;  $\frac{1}{2}$  mile from school; 4 miles from churches. Highways, good. General surface, rolling. Altitude, 550 feet. Nature of soil, gravel loam, excepting 13 acres of black loam. Acres that can be used as meadow, 30; in natural pasture, 19; in timber, 3. Acres tillable, all. Fruit, 200 apple and 12 pear trees in bearing, 50 apple and 60 sour cherry trees four years old. Best adapted to general crops. Fences, mostly wire, good condition. House, 2 stories, 9 rooms, in good condition. Outbuildings, basement barn 30x90, part gambrel roof, poultry house 30x18, hog house 30x18. House watered by well; barns, by springs, and field, by two streams. Occupied by owner. Reason for selling, desires a smaller farm. Price, \$9,000. Terms, \$3,000 cash, balance on mortgage at 6%. Might exchange for 40 or 50 acre farm. Address Fremont Finley, owner, Marion, N. Y., or C. I. DeZutter, broker, Williamson, N. Y.

TOWN OF ROSE

Population 1,883

No. 1274.—Farm of 135 acres, located 1 mile from Rose P. O., R. D. 1; 5 miles from railway station at Clyde on line of N. Y. C. R. R.; 1 mile from school and churches; 5 miles from butter factory; 6 miles from cheese factory. Highways, State roads. Surface of farm, rolling and level. Altitude, 500 feet. Soil, gravel and loam. Acres in meadow, 35; in natural pasture, 30; in timber, 6, mostly soft maple. Acres tillable, 125. Fruit, 200 old and 300 young apple trees. Best adapted to grains of all kinds, beans, potatoes and vegetables. Fences, post and wire mostly, some old rail fences. House, old style, 10 rooms, 50x28. Outbuildings: good basement barn, 80x40, carriage house and stable attached; one old barn, 30x40. Watered by well. Occupied by tenant. Reason for selling, to close an estate. Price, \$50 per acre. Terms,  $\frac{1}{2}$  cash, balance on time. Address Mrs. E. Hickok, owner, Clyde, N. Y., R. D. 1. Owner will rent.

TOWN OF SODUS

Population 4,857

No. 1275.—Farm of 100 acres; located 1 mile from Alton P. O., R. D. No. 1 and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school and churches; 6 miles from butter and cheese factory and milk station. Highways, good. General surface of farm, level. Nature of soil, clay loam. Acres in meadow, 25; in pasture, 25, in timber, 6, hard and soft wood; acres tillable, 80. Fruit, 20 acres of bearing apples. Best adapted to wheat, corn and potatoes. Fences, wire, in good condition. Two frame houses on farm, good condition. Outbuildings: large barn with sheds, etc., one large fruit dryer. House and barns watered by well; fields, by streams. Occupied by owner. Reason for selling, wishes to retire. Price, \$20,000. Terms, easy. Address Charles Emery, owner, Alton, N. Y.

No. 1276.—Farm of 200 acres; located 1 mile from Alton P. O., R. D. 1 and railway station on line of N. Y. C. R. R.;  $\frac{1}{2}$  mile from school; 1 mile from churches; 6 miles from butter and cheese factory and milk station. Highways, good. Nearest village Lyons, 5 miles distant, population 4,446, reached by rail or highway. General surface of

farm, level. Acres in meadow, 100; in timber, 10, hard and soft wood; acres tillable, 175. Fruit, 10 acres of young orchard. Best adapted to stock raising. Fences, wire, in fair condition. House and barns watered by wells; fields, by running water. Occupied by tenant, lease expires April 1, 1915. Price, \$8,000. Terms, easy. Would consider renting with option to buy. Address Christopher Gatchell, owner, Afton, N. Y.

No. 1277.—Farm of 100 acres; located 4 miles from Sodus P. O. and railway station on line of R., W. & O. R. R. and 2 miles from Rochester-Sodus trolley; 4 miles from high school; 1 mile from district school; 4 miles from churches and 2 miles from milk station. Highways, good, 2 miles to State road. General surface, rolling. Nature of soil, Dunkirk loam. Acres in meadow, 22; acres tillable, all. Fruit, 6 acres of bearing apples, 800 apple trees, 6 years old, 100 peach trees, 6 years old, 400 Bartlett pear trees, 400 Anjoes and 400 Clapp's Favorite. Best adapted to fruit. Fences, good, mostly wire. Large 14-room house, good condition. Outbuildings: main basement barn, 32x100, gambrel roof, poultry house and tool house, 34x70. House and barns watered by wells; fields, by spring. Occupied by owner. Reason for selling, ill health. Price, \$14,000. Terms, \$5,000 cash, balance on mortgage at 5%. This is considered a good fruit farm. Address Henry Whaling, owner, Sodus, N. Y., or Garfield Real Estate Company, brokers, Rochester, N. Y.

No. 1278.—Farm of 76 acres; located  $\frac{1}{2}$  mile from Alton P. O.;  $\frac{3}{4}$  mile from railway station on lines of R., W. & O. and N. Y. C. R. R.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from churches. Highways, good. General surface, level and a little hilly. Altitude, 550 feet. Nature of soil, sandy loam. Acres in natural pasture, 4; in timber,  $1\frac{1}{2}$ ; acres tillable, 70. Fruit, 30 acres of apple trees, mostly Baldwins and Greenings, 5 acres set 7 years, 5 acres set 2 years, interwoven with peaches, 5 acres of cherries. Best adapted to fruit of all kinds and general crops, tile drained. Fences, wire, in good condition. House, 2 stories, 10 rooms, furnace, good condition. Good 8-room tenant house. Five barns and large 3-kiln power evaporator. House watered by well; barns, by well, and fields, by stream, spring in pasture;  $2\frac{1}{2}$  miles from Lake Ontario and 1 mile from Sodus Bay. Occupied by owner.

Reason for selling, to settle an estate. Price, \$26,000. Terms, \$10,000 cash, balance on mortgage at 5%. Address Estate of Charles Youngs, Williamson, N. Y., owners, or C. I. DeZutter, broker, Williamson, N. Y.

## TOWN OF WILLIAMSON

Population 3,060

No. 1279.—Farm of 60 acres; located  $\frac{3}{4}$  mile from East Williamson P. O.;  $\frac{1}{2}$  mile from railway station on lines of R., W. & O. and N. Y. C. R. R.;  $\frac{1}{2}$  mile from R. & S. B. trolley at East Williamson;  $\frac{1}{2}$  mile from school and churches. Highways, good. General surface, level. Altitude, 550 feet. Nature of soil, gravel loam very productive. Acres that can be used as meadow, 10; in timber, 15; acres tillable, 45. Fruit,  $2\frac{1}{2}$  acres of apple trees, 35 years old,  $5\frac{1}{2}$  acres of apple trees, 10 years old, 15 peach, 1 pear, 70 cherry trees, 10 years old. Best adapted to general crops. Fences, wire, in good condition. House, 2 stories, 10 rooms, good condition. Outbuildings: basement barn, 56x60, poultry house, 10x40, wagon house, 30x30. House watered by well; barns, by well, and fields, by spring. Reason for selling, ill health. Price, \$12,500. Terms, \$4,500 cash, balance on mortgage of 5% for 10 years or more. Address John Plassche, owner, East Williamson, N. Y., or C. I. DeZutter, broker, Williamson, N. Y.

No. 1280.—Farm of 86 acres; located 3 miles from Williamson P. O.; 2 miles from railway station on line of R., W. & O. R. R.;  $1\frac{1}{2}$  miles from R. & S. B. trolley and State road;  $\frac{1}{2}$  mile from school; 3 miles from churches. Highways, good dirt road. General surface, level. Altitude, 550 feet. Nature of soil, loam. Acres that can be used as meadow, 20; in natural pasture, 3; in timber, 3; acres tillable, 80. Fruit,  $8\frac{1}{2}$  acres of apple trees in bearing,  $1\frac{1}{2}$  acres of pear trees, 20 years old. Best adapted to general farm crops and fruit. Fences, good. House, 2 stories, 16 rooms, hot air furnace, good condition. Outbuildings: gambrel-roofed barn, 30x40; barn, 28x32; tool house; corn house, 14x24; hog house, poultry house, smoke house and ice house. House watered by 3 wells. Occupied by owner. Price, \$150 per acre. Terms, \$4,000 cash, balance on mortgage at 5%. Address A. J. Contant, owner, Williamson, N. Y., or C. I. DeZutter, broker, Williamson, N. Y.



**FIG. 328.—HOUSE AND BARN ON FARM NO. 1277, TOWN OF SODUS, WAYNE COUNTY**



No. 1281.— Farm of 50 acres; located 2 miles from Williamson P. O. and railway station on lines of R., W. & O. and N. Y. C. R. Rs.;  $\frac{1}{2}$  mile from R. & S. B. trolley;  $\frac{1}{4}$  mile from school; 2 miles from churches. Highways, good. General surface, level. Altitude, 550 feet. Nature of soil, mostly sandy loam. Acres that can be used as meadow, 3; in timber, 12; acres tillable, 38. Fruit, 18 acres of apple trees, 16 years old; 27 Elberta peach trees, 1 year old; 175 pear trees, 17 years old; 64 quince trees and 56 Montmorency cherry trees, 3 years old. Best adapted to fruit and vegetables. Fences, good condition. House, 2 stories, 9 rooms, good condition. Outbuildings: gambrel-roofed barn, 1 kiln dryer, poultry house, hog house and tool house. House watered by well, barns by well, fields by springs;  $3\frac{1}{2}$  miles from Lake Ontario. Occupied by owner. Reason for selling, desires a smaller farm. Price, \$8,000. Terms, \$1,600 cash, balance on mortgage at 5%. Address John DeMay, owner, Williamson, N. Y., or C. I. DeZutter, broker, Williamson, N. Y.

No. 1282.— Farm of 47 acres; located 2 miles from Williamson P. O.; 1 mile from railway station at East Williamson on lines of R., W. & O. R. R. and R. & S. Bay trolley;  $\frac{1}{4}$  mile from school;  $\frac{1}{4}$  mile from churches. Highways, good. General surface, level. Altitude, 550 feet. Nature of soil, sandy loam. Acres that can be used as meadow, 6; in natural pasture, 4; in timber, 2. Fruit,  $2\frac{1}{2}$  acres of apples in full bearing, 2 acres of peaches, Elbertas and Crawford's, 4 years old;  $2\frac{1}{2}$  acres of pears, 4 years old and 2 acres of cherries, 4 years old. Best adapted to all kinds of farm crops and fruit. House, 2 stories, 11 rooms, electric lights

and steam heat. Outbuildings: basement barn, 40x80; poultry house, 12x18; hog house, 16x30; all buildings in good condition and painted. House watered by well; barns, by well, and fields, by well. Occupied by owner. Price, \$10,000. Terms, \$4,000 cash, balance on mortgage at 5%. Address E. E. Contant, owner, Williamson, N. Y., or C. I. DeZutter, broker, Williamson, N. Y.

## TOWN OF WOLOOTT

Population 2,952

No. 1283.— Farm of 55 acres; 2 miles from Fair Haven P. O., R. D. 5, on L. V. R. R.;  $4\frac{1}{4}$  miles from railway station at Red Creek on line of N. Y. C. R. R.; 1 mile from school; 2 miles from Methodist and Presbyterian churches; 2 miles from shipping station;  $4\frac{1}{2}$  miles from cheese factory. Highways, fair. Nearest city, Oswego, population 23,361, 16 miles distant, reached by rail. Surface, rolling and hilly. Soil, clay loam and gravel. Acres in meadow, 12; natural pasture, 7; timber, 4, beech and maple; acres tillable, 50. Fruit, 100 apple, 90 pear, 12 peach, 6 plum, 4 prune trees, cherries, quinces and grapes. Best adapted to wheat, oats, corn, potatoes and hay. Fences, wire and rail, good condition. House, 9 rooms, furnace, first-class condition, and woodhouse. Outbuildings, main barn, almost new, with basement, 30x55; new wagon house, 18x30; concrete floors in all barns; hen house, 15x75; silo. Watered by well, spring and creek. Farm is 1 mile from Lake Ontario; an ideal situation for fruit growing, especially apples. Occupied by owner. Price asked is about what buildings cost. Price, \$110 per acre. Terms,  $\frac{1}{2}$  down, balance on mortgage. Address F. L. Mixer, owner, Red Creek, N. Y.

## WESTCHESTER COUNTY

Area, 463 square miles. Population, 283,055. Annual precipitation, 54.26 inches. Annual mean temperature, 50.1°. Number of farms, 1,880. County seat, White Plains.

This county is located in the southeastern part of the state and borders on Connecticut. It is bounded on the west by the Hudson River, on the southeast by Long Island Sound, is intersected by the Croton River and is drained in part by the Bronx River.

The surface is hilly and diversified. There are found several quarries of choice white marble and also quarries of domotite (magnesium limestone). The soil is fertile and adapted to pasturage. It consists chiefly of slaty, sandy and gravelly loam. Crops reported are corn, 188,180 bushels; oats, 34,520 bushels; rye, 18,912 bushels; potatoes, 147,153 bushels; hay and forage, 52,252 tons; value of all farm property, \$66,156,044, an increase of 117 per cent. during the past ten years. The average price of improved land in this county is \$434.73 an acre. Domestic animals

reported are as follows: Dairy cows, 11,475; horses, 5,392; swine, 5,430; sheep, 1,140; poultry, 138,296; milk produced, 6,942,345 gallons; total receipts from the sale of dairy products \$765,727.

The county is intersected by the New York, New Haven and Hartford; New York Central, main line, and Harlem and Putnam branch railroads. Many residents of New York City have beautiful villas and country seats in this county. It contains the city of Yonkers and the large villages of Peekskill, Ossining and White Plains. The southern part of the county comprising the populous villages of West Farms, Kings Bridge, Morrisania was annexed to New York City some years ago. White Plains is only 22 miles from the Grand Central Depot, New York City, and contains Alexander Institute which has more than a local reputation. Several celebrated academic and military high schools are located in this county and there are 122 district schools. There is but one creamery in the county as most of the milk produced is shipped directly to New York City. Agricultural societies of the county are represented by 1 coöperative association; 2 granges; a farmers' club; a horticultural society, and a county agricultural society.

#### TOWN OF CORTLANDT

Population 22,255

No. 1284.—Farm of 120 acres; located 4 miles from Peekskill P. O., R. D. and railway station on line of N. Y. C. R. R.; 1 mile from trolley; 1 mile from school and churches. Highways, hilly for 1 mile, balance State road. General surface, level. Altitude, 400 feet. Acres in meadow, 70; in natural pasture, 25; in timber 25, mixed; acres tillable, 70. Fruit, large apple orchard and other small fruits. Best adapted to all crops. Fences, stone, rail and board. 12-room house, 30x26, good condition. Out-buildings: barn, 30x40; barn, 24x26. House and barns watered by well and springs; fields, by brook and spring. Lake Mohegan frontage on farm. Occupied by owner. Reason for selling, death in the family. Price, \$15,000. Terms, easy. Address Mrs. Chas. Townsend, owner, Mohegan, N. Y., or Barger & Powell, brokers, 934 South St., Peekskill, N. Y.

No. 1885.—Farm of 30 acres; located 3 miles from Peekskill P. O., R. D. No. 2 and railway station on line of N. Y. C. R. R.; ½ mile from school; 2 miles from churches and 3 miles from milk station. Highways, State road. General surface, level and on high ground. Altitude, 300 feet. Acres in meadow, 15; in natural pasture, 10; in timber, 5, chestnut, oak, hickory and ash; acres tillable, 20. Fruit, 5 acres of apples, pears, peaches, cherries and small fruit. Best adapted to general crops. Fences, stone and board. House, 40x40, good condition, slate roof. Out-buildings: barn, 30x40, good condition, slate roof; barn, 18x22, good condition. House and barns watered by well; fields, by lake, spring and well. Occupied by

owner. Reason for selling, has 3 other farms. Price, \$20,000. Terms, easy. Address A. W. Dean, owner, Peekskill, N. Y., or Barger & Powell, brokers, Peekskill, N. Y.

No. 1286.—Farm of 10 acres; located 1 mile from Peekskill P. O., R. D. and railway station on line of N. Y. C. R. R.; ½ mile from school; 1 mile from churches and 1 mile from milk station. Highways, State road. General surface, smooth. Altitude, 300 feet. Acres in meadow, all; acres tillable, 10. Fruit, 4 acres of all kinds. Fences, wall. House, 60x40, 20 rooms, good condition. Occupied by owner. Reason for selling, old age. Price, \$20,000. Terms, easy. Address Mrs. John Hennessey, owner, Peekskill, N. Y., or Barger & Powell, brokers, Peekskill, N. Y.

No. 1287.—Farm of 4 acres; located 2 miles from Peekskill P. O., R. D. and railway station on lines of N. Y. C. R. R. and trolley; ½ mile from school; ½ mile from Methodist and 2 miles from all churches. Highways, good gravel road. General surface, mostly level. Altitude, 200 feet. Acres in meadow, all; acres tillable, 4. Fruit, 2 acres, balance in garden and meadow. Best adapted to all kinds of crops. Fences, stone wall and board. 7-room house, 24x26. Barn, 24x30. House and barn watered by well; fields, by well. Reason for selling, wants larger farm. Price, \$4,000. Terms, easy. Address Lewis Tompkins, owner, Peekskill, N. Y., or Barger & Powell, brokers, Peekskill, N. Y.

No. 1288.—Farm of 80 acres; located 2 miles from Peekskill P. O. and railway station on line of N. Y. C. R. R.; ½ mile from school; 2 miles from churches and 2 miles from milk station. High-

ways, State road. Nearest large village, Peekskill, population 15,245, 2 miles distant, reached by trolley and highway. General surface, rolling and level. Altitude, 300 feet. Nature of soil, good. Acres in meadow, 60; in natural pasture, 10; in timber, 10, hard wood; acres tillable, 60. Fruit, 20 acres of apples and pears. Best adapted to all kinds of crops. Fences, stone, rail and board. House, 60x60, 2 stories, and 24x26, 20 rooms, all improvements. Outbuildings: barn, 30x40; barn, 30x40 and dwelling, 18x22; water in all buildings supplied from lake on property. House and barns, by running water; fields, by spring and brooks. Occupied by owner. Reason for selling, death in the family. Price, \$25,000. Terms, easy. Address Elizabeth F. Boggs, owner, Peekskill, N. Y., or Barger & Powell, brokers, 934 South St., Peekskill, N. Y.

## TOWN OF NEWCASTLE

Population 3,573

No. 1289.— Farm of 132 acres; 2 miles from railway station at Chappaqua. Soil adapted to general farming. 8 acres in orchard; 25 acres in timber. House, 14 rooms; tenant house, 5 rooms. Large barn, carriage house and other buildings, in fair condition. Spring water. Price, \$35,000. If desired, owner will divide farm as follows: No. 1, with all the buildings and about 82 acres; price, \$30,000. No. 2, fine rolling ridge of about 40 acres; price, \$12,000. The highway divides each. Address W. R. Hallock, owner, Mount Kisco, N. Y., R. D. 3.

No. 1290.— Farm of 154 acres; located 2 miles from Chappaqua P. O. and railway station on line of Harlem R. R.; R. D. No. 3 from Mt. Kisco; ½ mile from school; 1 mile from Protestant churches. Highways in good condition. Nearest large village, White Plains, population, 15,949, 10 miles distant, reached by rail and highway. Surface of farm, rolling. House, 10 rooms, good condition. Outbuildings, large and in

good condition. Watered by springs and brooks. Occupied by owner. Price, \$40,000. Address Wm. R. Hallock, owner, Mt. Kisco, N. Y., R. D. No. 3.

## TOWN OF YORKTOWN

Population 3,020

No. 1291.— Farm of 90 acres; located ½ mile from Shrub Oak P. O.; 4 miles from railway station at Peekskill on line of N. Y. C. R. R.; ¾ mile from school and churches. Trolley runs within ¼ mile of farm. Surface of farm, part rolling, part level. Altitude, about 700 feet. Soil, rich loam. Acres in meadow, 20; in natural pasture, 10; in timber, 15, oak and maple; acres tillable, 50. Fruit, 25 acres in orchard. Best adapted to alfalfa, corn, potatoes and truck gardening. Fences, wire and rail, good condition. Good tenant house, main house burned. Barn, in good condition. Watered by springs. Large lake adjoining farm, good for trout fishing. Occupied by owner. Reason for selling, owner in other business. Price, \$10,000. Terms, reasonable. Address Mrs. Blauvelt, owner, 150 West 103d St., New York City, or J. P. Christensen, agent, 320 Fifth Ave. New York, N. Y.

No. 1292.— Farm of 208 acres; located 1½ miles from Baldwin Place P. O. and railway station on line of Harlem Division of N. Y. C. R. R.; ½ mile from school and churches. Highways, State road. Nearest city, New York, 42 miles distant, reached by rail or highway. General surface, slightly rolling. Altitude, 700 feet. Nature of soil, silt loam. Acres in meadow, 25; in pasture, 35; in timber, 30, oak and chestnut; acres tillable, 100. Fruit, 12 acres. Best adapted to corn, alfalfa and vegetables. Fences, fair condition. House, 10 rooms, good condition. Outbuildings: two good barns, stanchions for 40 cows. Occupied by owner. Reason for selling, to settle estate. Price, \$25,000. Terms to suit purchaser. Address Meckes Jones, owner, 30 East 42d St., New York City, or J. P. Christensen, broker, 320 Fifth Ave., New York City.

## WYOMING COUNTY

Area, 606 square miles. Population, 31,880. Annual precipitation, 48.32 inches. Annual mean temperature, 46.6°. Number of farms, 3,529. County seat, Warsaw.

This county is situated in the western part of the state, is drained by Allens, Cattaraugus and Tonawanda Creeks and is bounded on the south by the Genesee river. The surface is undulating and quite extensively covered with woodland. Devonian sandstone and shale underlie a large part of this county and extensive salt

beds are also found, from which are taken large quantities of salt of excellent quality. In the southern part of the county the soil on the upland is gravelly loam and heavy clay, in the valleys a gravelly loam is found which is excellent for pasturage. In the northern part a heavy clay and gravelly loam resting on limestone predominates. Crops reported are as follows: Corn, 109,500 bushels; oats, 915,608 bushels; wheat, 254,788 bushels; buckwheat, 108,237 bushels; dry beans, 194,015 bushels; potatoes, 1,493,071 bushels; hay and forage, 142,315 tons. The average price of farm land per acre is \$28.99, an increase of \$5.59 per acre over 1900. Domestic animals are dairy cows, 28,066; horses, 11,732; swine, 10,487; sheep, 24,531; poultry, 158,211; milk produced, 14,033,000 gallons, the sale of which amounted to \$1,340,704. In the southeast corner of the county the Genesee River flows between perpendicular cliffs 350 feet high. There are several picturesque cataracts known as the Falls of Genesee one of which is 110 feet in height. The county is intersected by the Erie, Buffalo, Rochester and Pittsburg, and the Batavia, Attica and Arcade railroads and is connected with Rochester by the Genesee Valley Canal. Cheap, easy and quick transportation to the great markets of Buffalo and Rochester show the advantages of this location. A union school located at Warsaw and a collegiate institute located at Attica with graded schools in villages and 168 district schools place the county high up among the counties of the state in educational lines. There are 36 milk stations and factories in the county; 23 miles of state and county roads and 806 miles of graded and improved highways. The agricultural organization are 2 fair societies, 12 granges and a Pomona grange.

## TOWN OF ARCADE

Population 2,131

No. 1293.—Farm of 35½ acres; located 2 miles from Chafee P. O. and railway station; 1 mile from school; 2 miles from Protestant churches and butter factory; milk collected at door. Highways, good. 30 miles from Buffalo, reached by rail and highway. Full particulars given upon application to A. J. Crannell, owner, Chafee, Erie Co., N. Y.

No. 1294.—Farm of 322 acres; located ½ mile from Arcade P. O. on lines of Penn., B. & So. and B., R. & P. R. R's. Highway, in good condition. Nearest city, Buffalo, population, 423,715, distant 35 miles, reached by rail. General surface of farm, level. Altitude, 1,400 feet. Acres in timber, 25; acres tillable, 200. Best adapted to dairying. Fences, in good condition. House, frame, 2 stories, 11 rooms. Outbuildings, 1 40-head cow barn, another for 48 head; round silo, 18x36; hog house for 50 hogs; 200 sheep; hen house and granary. Watered, house, by well; barns, by windmill. Occupied by owner. Reason for selling, other business. Price, \$27,000. Terms, to suit purchaser. This farm is in a high state of cultivation. Acetylene lights in house, and can be put in barn. Furnace heats entire house. Concrete floors in cow barns and wagon house; 36 acres of crops on ground; 47 cows, 5 horses, all tools, etc., included in price. Address F. S. Mathewson, owner, Arcade, N. Y., or Chas. C. Grein, agent, 200 Pearl St., Buffalo, N. Y.

## TOWN OF EAGLE

Population 1,141

No. 1295.—Farm of 220 acres; located 4 miles from Bliss P. O., R. D. No. 2 and railway station on line of B., R. & P. R. R.; ¼ mile from school; 2 miles from churches; 2 miles from butter and cheese factory; 2½ miles from condensing plant. Nearest large village, Warsaw, population 3,206, 14 miles distant, reached by rail or highway. General surface, level. Altitude, 1,800 feet. Acres in meadow, 100; in pasture, 45; in timber, 75, beech, maple and hemlock. Fruit, for home use. Best adapted to beans, hay and grain. Fences, mostly wire, in good condition. House, double, with furnace, good condition. Outbuildings: barn, large gambrel roof, with silo, large poultry house and hog house. House watered by well and cistern: fields, by springs. Occupied by owner. Reason for selling, other business. Price, \$35 per acre. Terms, \$3,000 cash, balance at 5%. Address W. B. Kerr, owner, Pike, N. Y.

No. 1296.—Farm of 210 acres; located 1½ miles from Bliss P. O., R. D. No. 4, and railway station on line of B., R. & P. R. R.; 100 rods from school; 1½ miles from churches; 1½ miles from butter factory; 1½ miles from cheese factory and 7½ miles from condensing plant. Highways, good. Nearest large village, Warsaw, population 3,206, 18 miles distant, reached by rail and highway. General surface, some flat and some hilly. Acres in meadow, 40; in natural pasture, 60; in tim-

ber, 50, hard wood and basswood; acres tillable, 160. Best adapted to oats, potatoes, barley, buckwheat and hay. Fences, barbed wire, in fair condition. House, large, in very good condition. Barn very good. House watered by well; barn, by well, and fields, by creek and springs. Occupied by tenant. Reason for selling, other business. Address F. W. McElroy, owner, 18 Laurel St., Buffalo, N. Y.

## TOWN OF GENESEE FALLS

Population 615

No. 1297.—Farm of 174 acres; located 2½ miles from Castile P. O., R. D. 3; 2 miles from South Castile railway station on line of Erie R. R.; 3 miles from churches; 80 rods from school; 2 miles from cheese factory. Nearest large village, Warsaw, population, 3,206, 12 miles distant, reached by rail and highway. Surface of farm, level and rolling. Altitude, 1,200 feet. Good soil. Acres in meadow, 30; in natural pasture, 10; in timber, about 30, beech, maple, hemlock, chestnut and pine. Nearly all tillable. Fruit, apples. Best adapted to wheat, oats, buckwheat, beans, potatoes, etc. Fences, mostly wire. House, upright, 2 stories, wing, 1½ stories. Outbuildings: large barn, 30x85, nearly new, with carriage house, 16x26; cow stable, 18x32. Watered by spring and brook. Occupied by owner. Reason for selling, owner a woman and cannot attend to farm. Price, \$85 per acre. Terms, one-half or more down, remainder on mortgage. Address Miss Mary L. Smith, owner, Castile, N. Y., R. D. 3.

## TOWN OF MIDDLEBURY

Population 1,395

No. 1298.—Fruit farm of 13 acres; located 2 miles from Wyoming P. O.; 3 miles from railway station at Wyoming on line of B., R. & P. R. R.; 80 rods from school; 3 miles from butter factory; 2 miles from churches. Highways, good. Nearest large village, Batavia, population, 11,613, 12 miles distant. Surface of farm, level. Altitude, about 1,200 feet. Soil, gravelly loam. Fruit, apple orchard of 10 acres, 1 acre of plums and prunes. Best adapted to fruit. Fences, good. House, 7 rooms. Good barn, new. Watered by wells. Occupied by owner. Reason for selling, owner wants to retire from business. Price, \$3,600. Terms, \$1,000 down. Address E. L. Hayden, owner, Wyoming, N. Y.

No. 1299.—Farm of 193 acres; located 2 miles from Wyoming P. O., R. D. and railway station on line of Buffalo, Rochester & Pittsburg R. R.; 2 miles from school and churches; 2 miles from butter factory. Highways, good. Nearest village, Warsaw, 3,206 population, 6 miles distant, reached by rail or highway. General surface, level, some rolling. Nature of soil, loam. Acres in meadow, 30; in pasture, 15; in timber, 15, maple, elm and ash. Acres tillable, 125. Fruit, 200 apple trees, Spies and Baldwins. Best adapted to general crops and stock raising. Fences, wire, good. House, 10 rooms, good condition. Outbuildings, 2 barns with basement, other small buildings. House watered by well; barns, by well and windmill. Occupied by tenant. Reason for selling, old age. Price, \$50 per acre. Terms, one-third cash, balance at 5 per cent. Address A. B. Bradley, owner, Wyoming, N. Y., or Chapman's Real Estate Agency, agents, Le Roy, N. Y.

No. 1300.—Farm of 228 acres; located 2 miles from Wyoming P. O., R. D. 2; 3 miles from railway station at Wyoming on line of B., R. & P. R. R.; 60 rods from school; 2 miles from Protestant churches; 3 miles from butter factory; creamery wagon passes door. Highways, good. Nearest large village, Warsaw, population, 3,206, 8 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,200 feet. Soil, gravelly loam. Acres in meadow, about 78; in natural pasture, 60; in timber, 40, maple, oak, elm, ash and basswood. Acres tillable, 196. Fruit, 60 apple trees. Best adapted to wheat, beans, oats and peas. Fences, wire, fair condition. House, first-class condition, furnace in which natural gas is used. Outbuildings: barns, ample size and in first-class condition. Watered by never-failing spring. Occupied by owner. Reason for selling, owner wishes to retire from business. Price, \$16,000. Terms, \$5,000 cash, balance on mortgage. Address E. C. Hayden, owner, Wyoming, N. Y.

## TOWN OF WETHERSFIELD

Population 928

No. 1301.—Farm of 245 acres; located 3 miles from Bliss P. O., R. D. 1, and railway station on line of B., R. & P. R. R.; ¼ mile from school; 2½ miles from Baptist church; ½ mile from butter factory and cheese factory; 4 miles

from milk station; 12 miles from milk condensing plant. Highways, good. Nearest large village, Warsaw, population, 3,206, 12 miles distant, reached by highway. Surface of farm, rolling. Altitude, 1,400 feet. Soil, gravel. Acres in meadow, 80; in natural pasture, 60; in timber, 40 maple, beech, elm and basswood. Acres tillable, 160. Fruit, small orchard. Best adapted to dairying, wheat, hay, oat\* corn and barley. Fences, wire and rail good condition. House, of medium size, in good condition; also tenant house. Outbuildings: basement barn, 36x80; horse barn, 30x40. Watered by spring. Occupied by owner. Reason for selling, advanced age of owner. Price, \$10,000. Terms, part down. Address B. F. Neely, owner, Bliss, N. Y. R. D. Owner will rent.

No. 1302.—Farm of 244 acres; located 1 mile from Hardy's P. O. and railway station on line of B. R. & P. R. R.;

¼ mile from school; 2½ miles from Methodist church; 2¼ miles from butter factory; 1¼ miles from milk station and milk condensing plant; 1 mile from cheese factory. Highways, good. Nearest large village, Warsaw, population, 3,206, 12 miles distant, reached by rail and highway. Surface of farm, level. Altitude, 1,200 feet. Soil gravel. Acres in madow, 80; in natural pasture, 60; in timber, 15. beech, maple, etc. Acres tillable, 200. Fruit, apples and pears. Best adapted to dairying, hay, wheat, oats, barley and potatoes. Fences, wire, fair condition. House, 12 rooms, 2 stories, good condition. Outbuildings: basement barn, 80x36; barn, 26x30; barn, 30x40; hog pen, 16x20. Watered by pump and spring. Occupied by owner. Reason for selling, does not want so much land. Price, \$15,000. Terms, part down, balance on time. Address Ralph F. Bagg, owner, Bliss, N. Y., R. D.

#### YATES COUNTY

Area, 340 square miles. Population, 18,642. Annual precipitation, 31.75 inches. Annual mean temperature, 46.8°. Number of farms, 2,288. Average value of farm lands per acre, \$66.03. County seat, Penn Yan.

This county is located in the west central part of the state, in the "Finger Lake" district. Seneca Lake forms its eastern boundary, Canandaigua Lake its western, and Lake Kenka partly intersects it from the south.

The surface features of the county are marked by a series of five gently sloping ridges running north and south.

The soil consists of a fine quality of gravelly loam intermixed with clay and the disintegrated shales of the Portage group, and is particularly well adapted to pasturage, tillage or fruit growing. Among the valuable rocks that underlie the soil are Portage sandstone and Tully limestone. The county is well watered by streams, springs, lakes and ponds.

Ash, beech, elm, hickory, oak and maple are the leading trees of the woodlands.

Domestic animals are reported on 2,139 farms as follows: Dairy cows, 5,566; horses, 7,270; swine, 7,884; sheep, 36,554; poultry, 125,644. The number of farms reporting dairy cows was 1,907 and their total production of milk was 2,677,246 gallons. Total receipts from the sale of dairy products was \$156,044.

Yates is the second grape and wine producing county in the state. The first champagne produced in the United States was made in Yates County and this industry has steadily progressed until to-day it exceeds any other county in the United States in this production. The county is well equipped with transportation facilities, good roads, steam and electric lines. Buffalo, Philadelphia, New York, Syracuse, Rochester and other centers of population afford ample markets outside the county for all products of farm, garden, orchard and vineyard.

Educational advantages are of the best, there being, in addition to the many graded, high and academic schools, 104 school districts in the county.

Agricultural organizations comprise a county fair association, Yates County Agricultural Society and nine granges.

#### TOWN OF BARRINGTON

Population 1,044

No. 1303.—Farm of 75 acres; located 5 miles from Dundee P. O. and railway station on line of N. Y. C. R. R.; ⅛ mile from school; 1½ miles from

churches. Highways, level, fine condition. Population of Dundee, 1,228, reached by State road or rail. General surface, level, well drained. Altitude, 1,500 feet. Nature of soil, gravel loam. limestone. Acres in timber, 10, second

growth; acres tillable, 65. Fruit, 30 bearing apple trees; 7 acres of fine berries. Best adapted to wheat, corn, barley, oats, hay, beans, potatoes and alfalfa. Fences, wire, fair condition. House, 8 rooms, newly painted. Barn No. 1, 28x40; No. 2, 20x50, need some repairs. Occupied by tenant. Reason for selling, owner in other business. Price, \$4,000. Terms, \$1,500 cash, balance on mortgage at 5%. Address E. G. Hopkins, owner, Penn Yan, N. Y. or George G. Goodelle, broker, 46 Linden St., Geneva, N. Y.

#### TOWN OF BENTON Population 2,032

No. 1304.—Farm of 84 acres; located 2 miles from railway station at Benton or Penn Yan, on line of N. C. R. R.; 1 mile from school; 1 mile from churches. Highways, State road. Nearest village, Penn Yan, population 4,597, 2 miles distant, reached by highway. General surface, rolling or nearly level. Altitude, 1,000 feet. Nature of soil, clay loam. Acres in meadow, 20; in natural pasture, 7; in timber, 3; acres tillable, 81. Fruit, 6 acres of bearing vineyard, 5 acres of bearing orchard, 180 trees, mostly Baldwins. Best adapted to fruit, grain, hay, potatoes and beans. Fences, wire. House, 13 rooms, good condition, slate roof. Outbuildings: slate-roofed barn, 30x66; barn, 30x60; garage, packing house, 2 poultry houses and hog house. House watered by well and cistern; barns, by well and cistern; fields, by springs. Occupied by owner. Reason for selling, wishes to retire. Price, \$12,000. Terms, \$12,000 cash; or \$13,000, ½ cash. Address Robert E. Gardner, owner, Penn Yan, R. D. No. 9, N. Y. Owner will rent.

#### TOWN OF ITALY Population 861

No. 1305.—Farm of 174 acres; located 8 miles from Naples P. O., R. D.; 4 miles from railway station at West River on line of Naples branch of Lehigh Valley R. R.; 1 mile from school and churches. Population of Naples, 1,093, reached by level highway. General surface, valley flat. Altitude, 1,000 feet. Nature of soil, dark loam. Acres in pasture, 44. hillside and woodland; acres tillable, 130. Fruit, 50 apple trees; 6 acres of vineyard, 6 years old. Best adapted to wheat, barley, oats, beans and alfalfa. Fences, wire, good. House,

14 rooms, fine condition. Gambrel-roofed barn, with basement, nearly new, 30x60; two-story shed, 20x24. House watered by well; barn, by piped spring water. Occupied by tenant. Leased one year with privilege of 3 years, providing not sold. Price \$7,500. Terms, \$1,500, first payment, balance on mortgage at 5%. Address Geo. D. VanKirk, owner, Interlaken, N. Y., or Geo. G. Goodelle, broker, 46 Linden St., Geneva, N. Y.

#### TOWN OF JERUSALEM Population 2,444

No. 1306.—Farm of 46 acres; 1½ miles from Keuka Park; 6 miles from railway station at Penn Yan on line of N. Y. C. R. R.; R. D. 5 from Penn Yan. Nearest large village, Penn Yan, population 4,597, distant 5 miles. Highways, first-class. Acres in meadow, 2; acres tillable, 43; acres in natural pasture, 3; acres timber, 3. Fruit, 26 acres of grapes in bearing; 8 acres 5 and 6-year old grapes in bearing; 5 acres 6-year old peaches; 2 acres plums, 5 years old; and 1 acre of apples, all in fine condition. Occupied by owner. Fences around pasture. House, 2 stories, 30x40, in fair condition. Outbuildings: barn, 20x30, in fair condition; ice house and hen house. Old house, 20x30, with wing, 12x20, in poor condition. Watered, house, by well and cistern; barns, by spring. This farm is located on lake side with frontage of 1,500 feet on lake shore and within 1½ miles of Keuka College. Reason for selling, advanced age of owner. There are several cottage sites on the lake shore. For price and terms, address R. F. Scofield, owner Penn Yan, N. Y.

#### TOWN OF MIDDLESEX Population 1,122

No. 1307.—Farm of 124 acres, located ½ mile from Rushville P. O., R. D. 23, and railway station on line of Lehigh Valley Ry.; 1 mile from school, Catholic and Protestant churches. Highways, good. Surface of farm, part level and part rolling. Altitude, 670 feet. Soil, clay loam, some gravel. Acres in meadow, 20; in timber, 15. All tillable except woodland. Fruit, apples, 125 trees. Best adapted to corn, beans, wheat, barley, hay, oats, alfalfa, etc. Fences, woven wire, good condition. House, 12 rooms, good condition. Outbuildings, barn, 32x100; barn, 34x84; hen house; new hog pen, etc. Watered

by well, spring and creek, piped to barn and house. Occupied by owner. Reason for selling, ill health. Price, \$13,000. Terms, one-third cash, balance on bond and mortgage at 5%. Address Wm. H. Savage, owner, Rushville, N. Y. There is a natural gas well on farm, which furnishes light and heat.

No. 1308.—Farm of 35 acres, located  $4\frac{1}{2}$  miles from Rushville P. O. and railway station on line of Lehigh Valley way station; on line of Lehigh Valley Ry.;  $\frac{1}{2}$  mile from school;  $\frac{1}{2}$  mile from Union church. Highway, level. Canandaigua 14 miles distant, population 7,217, reached by highway and boat on

Canandaigua Lake. Altitude, 1,000 feet. Nature of soil, loam. Acres in meadow, 6; in pasture, 4; acres tillable, 30. Fruit, 235 apple,  $\frac{1}{2}$  acre raspberries, 250 peach, 30 pear, 75 sour cherry, 350 quince trees and 11 acres vineyard, in good condition. Best adapted to fruit, oats and corn. House, 6 rooms; small drying house. Barn, 20x30; hen house. Watered, house, by well and cistern; barns, by well. Occupied by owner. Reason for selling, desires larger farm. Price, \$4,000. Terms,  $\frac{1}{2}$  cash, balance, 5%. Address John Sheehan, owner, R. D. Rushville, N. Y., or Church & Church, agents, Canandaigua, N. Y.



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STATE OF NEW YORK  
DEPARTMENT OF AGRICULTURE

CALVIN J. HUSON, *Commissioner*

Bulletin 68

Proceedings of the Annual Meetings  
OF THE  
New York State Dairymen's Association  
AND  
New York State Breeders' Association

HELD AT

Rochester, N. Y.

December 15, 16 and 17, 1914

## NEW YORK STATE DAIRYMEN'S ASSOCIATION

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<i>Vice-President</i> .....	W. E. DANA.....	Avon, N. Y.
<i>Secretary</i> .....	W. E. GRIFFITH.....	Madrid, N. Y.
<i>Assistant Secretary</i> .....	H. E. JONES.....	Syracuse, N. Y.
<i>Treasurer</i> .....	R. R. KIRKLAND.....	Philadelphia, N. Y.

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## NEW YORK STATE BREEDERS' ASSOCIATION

### OFFICERS, 1915

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<i>Treasurer</i> .....	WING R. SMITH.....	Syracuse, N. Y.

### DIRECTORS

Term expires 1916.	Term expires 1917.	Term expires 1918.
E. W. MOSHER.	G. E. PEER.	PROF. H. H. WING.
E. A. POWELL.	G. W. SISSON, JR.	H. S. GAIL.
E. S. AKIN.	W. G. MARKHAM.	H. B. WINTERS.
H. L. WARDWELL.	R. T. WAINWRIGHT.	GEO. A. SMITH.

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## FIRST SESSION

TUESDAY, DECEMBER 15, 7.30 P. M.

The joint meeting of the New York State Breeders' Association and the New York State Dairymen's Association was called to order by President H. C. Elwood, of the Dairymen's Association, who said:

We have with us, as is usual, one good soul who will give us, I know, a most hearty welcome on our visit to Rochester, the mayor of the city. He, his agent, and other interested societies have been most kind to us, and I now take pleasure in introducing Major Edgerton.

### ADDRESS OF WELCOME ON BEHALF OF CITY

HIRAM H. EDGERTON, MAYOR OF ROCHESTER

This title of "Major" that your chairman has just given me reminds me of a story that was told by a former resident of Rochester. He said that it was generally supposed that all the titled people in the world lived in Europe, but that was a great mistake; that there were more titled people in America than in any other country in the world — in fact, most everybody had titles. He said at home they called him "Fatty." He traveled South at one time and people called him "Captain," and in Richmond they called him "Colonel." In New Orleans people called him "General." He said he was walking along the streets in Galveston and a man said to him, "My God, is this you?" (Laughter.)

I am not breeding anything just at present, except, possibly, it may be trouble. And the worthy secretary of our great Chamber of Commerce, who is an orator of renown, I believe would give me a certificate which would probably entitle me to a gold medal as being one of the greatest breeders of trouble that could be found.

Among the many names that Rochester has is that of Convention City, and for the past two years it has been my privilege and my practice as well as my pleasure to meet and extend the hand of friendship, and the welcome and greetings of my fellow

citizens, in gatherings of this kind. The fact that I am not a breeder of any kind should not interfere at all in my interest in what you stand for and what you are trying to do, and in my feeble way I want to help all I can.

There is one thing we have here in Rochester that probably you all have heard of, and that is our annual exposition. It is growing to be a great exposition, and I hope at the coming one this fall to give you an opportunity to make an exhibit of your fine stock of all kinds — cattle, horses and sheep, and I want to invite you all to come and help us make this a show almost equal to the one held in Syracuse.

I am not going to talk to you at length; I simply wish to extend to you the greeting of our city. Most of you know all about our city, and if I should talk too much about it you might think I was prejudiced, but I am not. I want to extend to you again the heartiest greeting possible, and the wish that your convention here will be productive of good results, that your visit will be pleasant, and that you will carry away with you pleasant recollections of your visit.

Gentlemen, I thank you.

CHAIRMAN: The next on the program is an address of welcome by Mr. Woodward, on behalf of the Chamber of Commerce. I believe that a city that has a dead Chamber of Commerce is a dead city. Rochester is absolutely a live wire, and her chamber is just as alive. I take great pleasure in introducing Mr. Woodward.

#### ADDRESS OF WELCOME ON BEHALF OF CHAMBER OF COMMERCE

ROLAND B. WOODWARD, SECRETARY

Mr. President, Mr. Commissioner and Gentlemen: I am sure you know, without my telling you, that it is unnecessary for his Honor, the Mayor, and myself to be here to have you believe that you are welcome to Rochester. We have been telling you for some time that you would be welcome to Rochester, and we are here merely to carry out the courteous invitation of your officers and to reassure you of your welcome; and that welcome is a great deal warmer than the weather outside would indicate.

We are glad you are here, not because you are merely a convention of strangers meeting here, and not because we merely want people to come to the city for any pecuniary benefit to us; but we are especially glad you are here because you represent an educational force. Yours is the type of meeting that we are doing our utmost to encourage, and your coming here is in unique keeping with the character of the city and with the character of its environment. We are getting back more and more to the fundamentals and the essentials of life, and Rochester is a place that does not put up with tawdry, superficial and worthless things. And you, gentlemen, can make a great contribution to the progress and the prosperity and the well-being of this section. So we are glad you are meeting here, and we hope you will find your meeting here so pleasant and profitable that you will be glad to come back here, and come again and again, in order that Rochester and this valley may find in your meetings increasing profit.

You are not here for sight seeing. Some of you are here perhaps for the first time, in some years at least, and I want to take this occasion to give you a welcome to the Chamber of Commerce rooms and to the use of its lunch room and other facilities. If you are interested in boards of trade or chambers of commerce at home, we may be able to exchange ideas with you — to swap some things to our mutual benefit. And tonight I can merely reiterate our invitation, and to tell you that 1,750 members of the Chamber of Commerce extend to you, through me, a welcome on behalf of the business and commercial interests of the city, and we hope you will find it so pleasant and profitable in this meeting that neither the foot and mouth disease or anything else will prevent your coming in force next year, with the exhibits we would like so much to see.

#### **RESPONSE ON BEHALF OF THE STATE DAIRYMEN'S ASSOCIATION**

H. C. ELWOOD, PRESIDENT

Mayor Edgerton, and Mr. Woodward, of the Rochester Chamber of Commerce: It is a pleasurable duty to reply to your words of welcome to-night to our Association. When your live-wire body, the Chamber of Commerce — bearing credentials from the executive officer of this city — extended to us a cordial

invitation to visit Rochester, we knew that when the time came, the glad hand of fellowship would be extended to all, and that everything within your power would be done to make our stay within your portals a helpful and pleasant one. I take this opportunity of assuring His Honor, and through him the City of Rochester, that the Chamber of Commerce and its officers have been most active in helping us to perfect our arrangements for this convention.

Circumstances over which we had no control caused us, almost at the last moment, to radically change our general plans. Our original plan called for the largest, and what we hoped would be the best convention ever held by the New York State Dairymen's Association. Owing to the foot and mouth disease and the embargo placed by the federal and state government upon cattle and the shipment of same, we were confronted with the fact that we could have no cattle to exhibit in your splendid exposition buildings.

Our tentative plans provided for, and the enrollment of exhibitors gave positive assurance, that beyond a doubt we would have held the largest cattle sale of Holstein-Friesian cattle ever held in the United States. Mr. Hastings of Lacona, N. Y., a most thoroughly competent man in this work, would have had charge of it.

As we had advertised to our prospective exhibitors that the cattle sale and show would take place, we felt that it would be only wise and just, in view of the circumstances, to call off all exhibitions, as we could not hope with our exhibitors to fill the large space which is available at your park. Consequently, the officers of our association, at a special meeting, decided to hold our sessions at the Seneca Hotel and wait another year for an exhibition such as we believe should be commensurate with the importance of the New York State Dairymen's Association and its allied interests.

It seems opportune at this time to mention the fact that in the last few years the scope of work properly fathered by the parent organization, under the general term of agricultural interests, as embodied in the New York State Dairymen's Association, has caused us to call our conventions in larger cities than formerly. I am safe in saying that I believe our coming to Rochester, the



FIG. 329.—H. C. ELWOOD





largest city in which any of our annual meetings have ever been held, has proven a success. The facilities of every nature are ample, and the ease with which one can reach your doors, all contribute to an instructive and beneficial visit.

My only regret is that the people of your good city will not have the opportunity to visit a general exposition such as we had planned, for their own instruction. Had we been able to have the cattle, a model working creamery and cheese factory, I am sure that the citizens of your city would have been benefited in knowing the "whys and wherefores." The subject of milk as a food product, etc., is one of the most vital of the present time.

All I can say is that we planned, but our plans in part fell through, and I ask all who are with us to-night and who may attend the next two days' sessions, to turn in and help the officers and the association to make this what we want it to be — the best meeting we have had up to date and hope for in the future.

#### RESPONSE ON BEHALF OF THE STATE BREEDERS' ASSOCIATION

CALVIN J. HUSON, PRESIDENT

Mr. Mayor, Mr. Secretary: I regret that there should be any apparent misunderstanding, at the outset of this meeting, between the President of the Dairymen's Association and our good mayor as to the title to which he is entitled here in Rochester. Mr. Elwood insisted upon addressing him as "Major." Mr. Elwood, you know, lives in Buffalo, and I don't believe any man, unless he lives in Buffalo, would think of giving Mayor Edgerton a title like that. Those of us who live nearer Rochester know that he is entitled at least to the title of "Major-General." If there is any man up in Buffalo who does not think that is so, let him come down here and run for mayor against him, and he will find out that he is entitled to at least that title. (Laughter.)

For my part, I am glad to get back to Rochester again, for this is not the first time that the State Breeders' Association has met in this hospitable city. We held our annual meeting here last February, and the welcome was so cordial, the arrangements were so complete, and we enjoyed ourselves so well, that we were glad to come back here again and bring the Dairymen's Association with us. There has been some fear on the part of some of the

members of the Breeders' Association that we might be swallowed up by the Dairymen's Association but we were here on the ground first and we are going to look out and take care of that.

I do not know how the Mayor attends all of these gatherings and extends words of welcome in behalf of his great city. We have called upon him to do it very frequently. I have been present when he has done it on a number of occasions, and I can testify tonight that he does it more cordially and more gracefully as time goes on.

Secretary Woodward said that we were not here for sight-seeing; nor are we here simply as a matter of pleasure, although it is a pleasure to all of us to meet here for the purpose of renewing pleasant acquaintances and friendships. There is a more serious purpose behind both of these great organizations, that for the first time in their history meet together in joint convention. They are the only real state organizations representing our animal husbandry interests. And members of these organizations, I fear, do not always appreciate to the full the importance of the animal husbandry interests of the great state of New York. Why, the farmers and breeders of this state have invested in their horses, their cattle, their swine, and their sheep, more than \$200,000,000, and it is an interest that lies at the very foundation of the prosperity of the agriculture of the state! While our animal husbandry interests are not what they ought to be, we are here to consider ways and means by which they may be advanced — by which we may do something to promote the particular line of breeding in which we are interested. And this is an opportune time, I think, when these two organizations should meet together, for there never was a time when there were greater questions to be considered, when there were greater issues to be determined, than at the present time. It is important that we should consider these great questions, many of which will come before the legislature for solution at the approaching session. It is important that these organizations should consider these questions and be represented before legislative committees, and before the legislature, in the consideration of them.

Since the Dairymen's Association met before, we have in force in the state of New York what is known as the Sanitary Milk Code, an entirely new proposition under which milk must be



FIG. 330.— CALVIN J. HUSON





produced and marketed at the present time by the dairymen of the state. Questions will arise in regard to changes in the present regulations on that subject, and it is important, I say, that the producers of milk should have a voice in determining what the policy of the state shall be upon that subject. We all agree that we should produce good milk, healthful milk, but we are equally interested in having the policy of the state so shaped that men can produce milk under reasonable conditions and restrictions, and at a profit to themselves. For what does it avail, with all the investment of labor that is put into the production of milk in the state, if conditions are such that the small producer, particularly, is unable to produce his product and put it upon the market at such a price as will afford him a fair degree of profit for the capital invested and the labor involved?

The breeders of the state have been suffering considerable inconvenience, and many of them considerable loss, growing out of the outbreak of foot and mouth disease. Mr. Elwood told you something of the plans which were in mind for the meeting here in this city, that have been prevented by reason of the quarantine necessitated by the outbreak of this foot disease. I thought at first he was going to charge it against me because I happened to be the instrument through which the quarantine was established. But while it may have subjected all of you to inconvenience, and some of you actual loss, I think the great body of stock-owners in this state have appreciated the gravity of the situation—have appreciated the necessity of rigid rules and regulations to stamp out the disease before it obtained such a foothold as would threaten the destruction of, or serious injury to, the animal husbandry interests of the state.

I say we are glad to get back to Rochester again. We always have good meetings here in Rochester; we always have the support of the local people, and we are glad to be here amid these pleasant surroundings. And I do not know, after all, but that it were better we should meet here in this room and consider the questions that are so serious, and so important, rather than the other plan that we failed to carry out, by reason of the fact that I have stated. But I hope with Mr. Elwood, that another year this pretentious plan which the Dairymen's Association has evolved

can be carried out here in Rochester, and that it may result in the good that he contemplated.

Dr. Williams is to speak to you tonight on the very important subject, "Sterility and Abortion." We had some difficulty in arranging a program that would interest all of the members of both organizations. We think we have succeeded quite well. We will have a discussion to-morrow on "The Foot and Mouth Disease," led by Dr. Claris of Buffalo, who has had charge of the enforcement of the quarantine regulations in the state, west of Syracuse. We are to have an address by Mr. Collingwood on the "Troubles of the Small Breeder," and an address on "Sheep Husbandry" by Joe Wing, whom you all know and like to hear. I know that these sessions will be of interest and profit to all of us. I know when we meet in a city like this, where there are so many attractions, it is sometimes a little difficult for us to get together promptly; but if we are to make this meeting the success it ought to be, every member who is interested in the success of these two organizations ought to be present very promptly at every session of the meeting.

I thank you.

MAYOR EDGERTON: May I say one or two words more before I leave? In supplementing the invitation for you to come again, I want to say that Rochester has one of the finest exposition parks in this or any other country. On that exposition ground we have an assembly hall which will seat 1,300 people. We also have three connected buildings containing 85,000 square feet of floor surface — one 30,000, one 44,000, and one 11,000. All of these may be used by your associations at any time you wish to come here. And you will find every accommodation in Rochester that you can in any other city in this country, and always a hearty, cordial greeting.

CHAIRMAN: The appointment of committees will be read to-morrow morning at the opening session of the New York State Dairymen's Association. Commissioner Huson, President of the New York Breeders', will announce his committees at the present time.

MR. HUSON: Under the by-laws, there are two standing committees to be appointed — the Committee on Resolutions, and one

on auditing the treasurer's accounts. I name as the Committee on Resolutions, Mr. S. Brown Richardson, Chairman; Prof. H. H. Wing; E. S. Akin; W. G. Markham, and H. B. Haarpending: and to audit the accounts of the treasurer, Mr. George E. Peer and Mr. Harry S. Gail. Under the by-laws, all resolutions intended for consideration by the Breeders' Association are referred to the Committee on Resolution, without debate.

CHAIRMAN: The banquet will be held to-morrow evening, and tickets may be obtained either from Secretary Griffith of the New York State Dairymen's, or Secretary Brown of the Breeders' at \$2 each. The banquet will be held in this room at seven o'clock to-morrow night. It will not be confined to members; members are requested to invite all they choose.

CHAIRMAN: I now take great pleasure in introducing Dr. W. L. Williams.

#### STERILITY AND ABORTION

DR. W. L. WILLIAMS, CORNELL UNIVERSITY, ITHACA, N. Y.

Cattle breeders have been concerned for many years in the losses due to abortion. The occurrence has been so frequent, and at times so many abortions have taken place in a short time in one herd or community, that it has been looked upon as a disease. In the popular mind it has occupied the unique position of an important disease with but a single symptom—the death and expulsion from the uterus of an immature fetus.

Each disease has more than one symptom or sign of its existence. We need to differentiate between the infection of contagious abortion and the symptoms caused by the infection. We have defined contagious abortion (Report of the New York State Veterinary College, 1911-1912, page 79) as, "A widespread, highly distinctive, chronic infection which expresses itself by a variety of symptoms, four of which stand out prominently." The four prominent symptoms mentioned are abortion, premature birth, metritis with retained afterbirth and sterility.

Every cattle breeder of experience recognizes the intimate association between these four symptoms, and not infrequently remarks that abortion is frequently associated with premature birth, re-

tained afterbirth and sterility, but he too often fails to link them together as a chain of symptoms due to a single cause. He knows, or should know, that a heifer or cow temporarily sterile and requiring repeated service by the bull, is very liable to abort after she has conceived and he knows that many cows after they have aborted once, do not readily breed, but he views these phenomena as coincidences rather than as consequences, and symptoms of a common cause. So he observes that after aborting, a cow is very liable to suffer from retained afterbirth but fails to note that the same infection or disease in the uterus may cause retained afterbirth in cases of premature birth or of birth at full term.

It has been a great misfortune that breeders and dairymen have come to regard the phenomenon of abortion as the sole measure of importance of this disease. The abortion is really a minor phase. The retained afterbirth with the serious and often fatal inflammation of the uterus which causes it, the frequent chronic inflammation of the uterus with a filthy, repulsive discharge of pus, the frequent sterility, the loss of milk — all conspire to cause losses, which combined, or even some of them alone, outweigh the loss to the owner through the mere death of the fetus.

If we are to estimate the importance of the disease aright, we must take the broader view and include the four symptoms named, along with others of less frequency, as indicating one disease capable of inducing many symptoms. We are not claiming, however, that each of these symptoms is *always* referable to a single disease. We do say that an overwhelming majority of the cases of sterility, abortion, premature birth and retained afterbirth are due to a common cause which has unfortunately come to be designated as contagious abortion.

There is no agreement as to the frequency of the infection and can be none until there is substantial agreement as to the symptoms which indicate its presence. Even those who accept the phenomenon of abortion as the sole and only indication of the presence of the disease are not at all agreed. One may say there must be four or five abortions in a herd, another ten or fifteen in rapid succession before it can be called contagious, before it can be a disease. Even then they may fail to see the abortions and

make their count. Prior to the fifth month of pregnancy, the little fetus usually disappears unseen, the cow is again in heat and is said to be sterile. And in the later days of pregnancy, when the mature calf is expelled dead and the death has been due to the same cause as that of the six or seven months fetus, the abortion is not recognized. So there may be, and often are, many abortions in a herd which pass unseen. Even with the narrowest view, few herds of twenty-five or more cows escape for many successive years notable devastation from abortion.

If, however, we take the broader view and recognize as symptoms of equal significance, abortion, sterility, premature birth, and retained afterbirth, we must at once include in the infected list practically all herds of size, and recognize the infection as constant in the herd.

Recently investigators have resorted to what are known as the agglutination and complement-fixation tests of the blood of suspected cattle with cultures of the bacillus described by Professor Bang and generally accepted as the essential cause of abortion. In our investigations, we have, according to this test, recognized the infection in each herd yet tested and in a majority of adult animals. We have found the blood reacting in some young calves in each herd where tested and in some herds where the calves had scours and pneumonia, many of those between fifteen and one hundred days old have reacted strongly. As a rule, we find that the blood of heifers reacts sharply within a few days after having been first served by a bull, and thereafter, if regularly tested, will react frequently, sometimes constantly, even though appearing healthy. So if we accept this means of diagnosis, we are forced to admit that the infection is essentially universal.

If we accept this view, it must be admitted that in most animals the infection may be present without causing visible disease. It has been shown by some that the organism frequently occurs in the milk but thus far there has been no evidence that it damages either the udder or the milk, but its presence in the milk may be one cause of scours and pneumonia in calves. If this be true, the organism may live in the intestines or in the lungs and even there perhaps not always cause disease. We possess important evidence that except in young calves the organism may cause serious

disease only when it exists extensively in the genital organs themselves, especially in the uterine cavity.

How and when the infection enters the uterine cavity is not yet agreed. Some say the infection may enter the uterus through the vagina at the time of copulation or at any time thereafter during pregnancy. Others insist that the infection is usually taken in during pregnancy through the mouth with food or water and conveyed through the blood or lymph to the uterus.

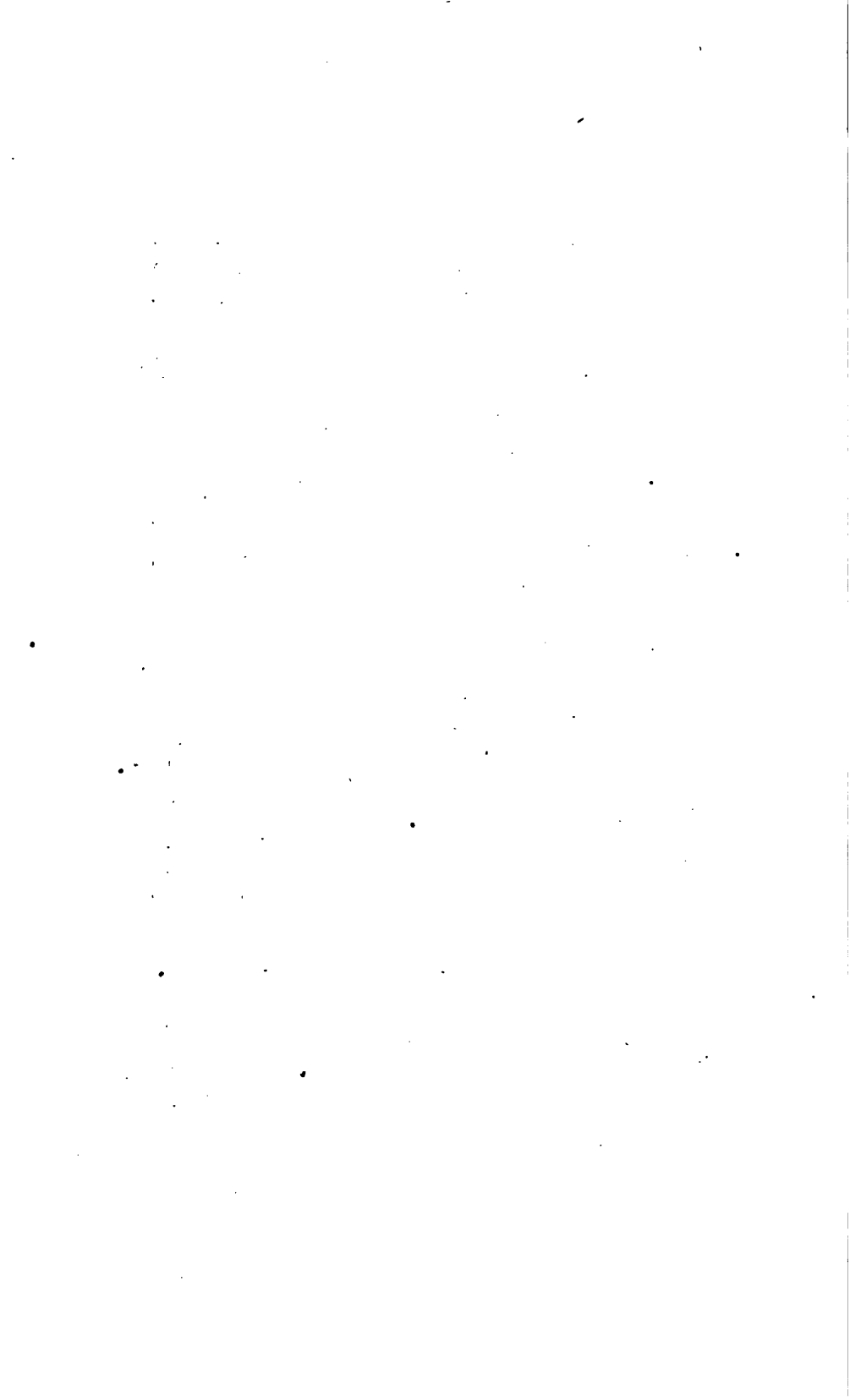
We have for several years contended — and our investigations have thus far ably supported our view — that the disease, the abortion, sterility, premature birth, retained afterbirth, etc., can only be caused by the invasion of the uterine cavity or the other essential organs of generation. We further hold that the invasion must needs occur prior to copulation, during that act or soon thereafter, before the uterus has become sealed. Normally the uterus is sealed at thirty to sixty days after conception and all communication with the exterior through the vagina apparently ceases. (Illustrated with lantern slide showing uterine seal.)

Based upon this belief, it is reasoned that the infection frequently exists in the uterine cavity long before copulation and is sufficiently virulent or voluminous to prevent conception, and thus causes either temporary or permanent sterility. After repeated copulation, conception may finally occur, but the infection may yet be present and later multiply to cause abortion, or weaker in character, does not kill the fetus but causes inflammation of the uterus in a manner to lead to the early expulsion of the living fetus as a premature birth. If the infection is still less powerful, though causing disease of the uterus, the pregnancy may continue for the normal period, the mature calf be expelled apparently well, and the afterbirth be retained.

These varying views have an important bearing upon the possibilities of prevention or cure. The teaching by many that the infection may enter the uterus at any time in pregnancy and cause abortion or other disaster has led breeders to believe that abortion, even after the infection is present in a large amount in the uterus, can be cured. If the organism of contagious abortion can be eaten in food, absorbed from the intestines and carried by the blood into the space between the uterus and afterbirth where the blood itself



FIG. 331.—DR. W. L. WILLIAMS



does not go, as asserted by many, then it has been reasoned that various drugs may be carried to the same neutral cavity and miraculously disinfect the great masses of infective material. We have observed upon the killing floor of abattoirs, literally gallons of the substance known as abortion exudate, in which the Bang organism usually is present in great abundance. Some believe that if they inject a few drops of carbolic acid beneath the skin of a pregnant cow, it will go forthwith to the uterine cavity and kill the bacilli hidden away in the gallons of exudate. It has not yet been shown that a particle of any drug given a pregnant animal has ever entered this space. But if all the carbolic acid injected beneath the skin in the usual manner were thrown into this cavity, which it certainly is not, it would not suffice to disinfect 1 per cent. of the infected mass. If the exudate were all gathered from a diseased uterus into a convenient receptacle and carbolic acid were added to it to disinfect, it would require probably a pound of crystallized carbolic acid to serve the purpose, but it cannot be shown that by the popular method 1/1000 of a grain reaches the part.

The same holds true of other drugs. We are frequently asked regarding methylene blue. We have watched its use with interest and hope to watch it more. As yet we have neither observed, nor gathered from the recorded observations of others, any ground for hope from that drug. This is a day of vaccines and immunization and this disease would be wholly out of fashion if not adorned with some form of vaccine, bacterine, curative or preventive serum. (Illustrated with lantern slide chart of experiment with "abortion bacterin" upon eighteen heifers in first pregnancy, in a herd where abortion is severe in heifers. Three heifers [17 per cent.] were sterile or aborted unseen [pregnancy had been diagnosed by rectal examination]. Eight [44 per cent.] were known to have aborted. Two [11 per cent.] calved prematurely and five [28 per cent.] calved at about the normal period. Two of the heifers died as a direct result of the disease. The eleven heifers which failed to produce living calves during the first breeding year, produced altogether twelve calves during the two succeeding years. In this number was one pair of twins so that in the second and third breeding years this group averaged one birth per year for each two cows. The seven heifers which

gave birth to living calves from first pregnancy, produced eight living calves from second and third pregnancies.)

We have observed their use by others and have tried them experimentally. We expected no benefit from their use and our expectations were fully realized. According to our studies, the infection may invade the body of the new-born calf, and vacillate in intensity from week to week, month to month and year to year, finally dying when the carcass of the aged cow is destroyed. The disease itself induces no valuable immunity and we have no reason to hope that any serum, made along present lines, can either cure or prevent its ravages.

The entrance into the consideration of this disease of the theory of immunity has been very unfortunate. It is a paradox. Most breeders think that they believe that because a cow has once aborted, she is less likely to abort again, and yet every breeder knows very well that he does not believe any such thing. If a breeder really believed such a thing, he would mark up his price on a cow every time she aborted, calved prematurely or had retained afterbirth, and would boldly tell a prospective buyer that the aborter had increased in value anywhere from 50 per cent. to 100 per cent. because she had aborted so much that she had become immune. If the breeder really believed in the vaunted immunity he would rarely think of parting with an aborter. The theory is absurd. It is, in fact, the theory of vicarious immunity; that is, because an unborn calf has died from this infection, the mother of the calf, or a prospectus fetus of that mother, is to be immune.

Our data show with great emphasis that abortion, sterility and retained afterbirth do not induce immunity, but lower the vitality of the animal, and, unless successfully handled, tend constantly to render the animal more vulnerable. On the other hand, our data show that a virgin heifer which conceives at her first copulation, carries a calf for about two hundred and eighty days, calves promptly and the afterbirth comes away in an hour or two, is bred again, conceives at the first service and again calves naturally, has a far higher immunity for her third pregnancy than the heifer that has required three or four services before she has conceived either her first or second time and each time has suffered from abortion, premature birth or retained afterbirth.

It is quite true that a heifer which has aborted during her first pregnancy is less liable to abort during her second pregnancy. Of course this is so because her *liability* to abort in her first pregnancy is not a liability at all but simply an accomplished fact. It is positive and there can be no superlative. She cannot be *more* liable to abort in her second pregnancy because she can only abort once for one pregnancy. Abortion is preeminently an infection of the young. (Lantern slide chart shown, illustrating abortion rate in herd for ten years with 38 per cent. of abortions in first pregnancy, 12 per cent. in second and 3 per cent. in third and later pregnancies.) A heifer is more likely to abort in her first than in her second pregnancy but the heifer which has aborted or had retained placenta from her first pregnancy, is far more likely to be sterile, to abort, or to have retained afterbirth her second breeding year than is the heifer which has bred readily and normally her first year.

Any kind of doctoring may be followed by a temporary decrease or cessation of abortion but that is no test. Usually after a storm of abortion, the virulence abates; many of the cows in a herd are sterile and naturally could not abort. Sometimes the disease expresses itself for a time chiefly in the form of premature birth and retained afterbirth. Certainly that is not a cure, nor even a great amelioration.

We have long held that once impregnation has occurred and the uterus is sealed, the fate of the contained fetus is sealed. If the cavity of the uterus is clean, is free from infection, the pregnancy will endure about two hundred and eighty days; a living healthy, vigorous calf will be expelled promptly when labor sets in; the afterbirth will follow the birth within an hour or two, and the birth will be followed by no discharge from the genital organs. If the sealed uterus contains the abortion infection, the cow may abort, calve prematurely, have retained afterbirth or do almost anything but please the owner. If the uterine cavity is healthy when sealed, the pregnant cow may slip or fall, may be gored by other cows, may be tumbled about in any and all ways, may be given poor food and bad water, but she will be reasonably sure, if she herself lives through the ordeal, to drop a healthy calf. If her uterus contains the infection of abortion, a slight

slip or fall, a jump while at play, a drink of cold water, a fright from a rat, may be followed by abortion — perhaps they even contribute towards it.

After attempting in vain to cure the abortion infection in already pregnant cows, numerous investigators have now turned their attention to the production of an immunity in heifers and cows prior to impregnation. For this purpose, they have resorted to artificial infection with the Bang organism. They fail to take into account that many heifer calves when but a few days old become seriously infected with the Bang organism, and yet, according to our investigations, this experience not only affords no immunity but it rather appears to render the animal more vulnerable to attack, whether measured by abortion alone or with the addition of sterility, premature birth and retained afterbirth. In estimating the value of a curative or preventive remedy, we must measure its ability to eliminate, control, cure or in some way decrease the losses from any and all phenomena expressive of the activity of the malady under consideration. Any remedy capable of controlling or repressing any one of the prominent symptoms must necessarily affect in like measure all the symptoms.

Up to the present time we have no such remedy. We have no known methods for curing abortion in pregnant cows. We have no cheap, rapid or certain method for eliminating the infection from a herd. In order to accommodate those who wish such a remedy, various concerns place upon the market alleged remedies, which, they assure breeders, will cure abortion; and the breeder in his distress buys.

Thus far we have given only the dark side of the problem, and naturally the breeder listens for some note of hope, some word of encouragement. The older breeder remarks that fifty years ago, as a boy, he saw little herds of cows, not at all lavishly fed, stabled but little, each animal of which conceived at a single service each year, produced a living, vigorous calf; the calf knew no scours or pneumonia, grew rapidly, and in due time the heifer became pregnant at the first service and calved normally. The contrast is drawn between then and now. Possibly a critical study of the conditions then prevailing and the results of those conditions would not now be amiss. Of course our demands have

changed. The ordinary grade cow of fifty years ago, which bred so regularly, was more capable of making three or four pounds of butter per week than thirty or forty pounds. We now demand higher efficiency and we are getting it. The problem is not whether we shall resume the conditions of the common herd of fifty years ago and accept again that standard of efficiency, but how we may, without imperilling the efficiency which has been obtained, lay hold of and effectively apply in our management the essential elements of care which formerly maintained and which even now maintain in many grade herds—a high breeding efficiency.

What are those elements? The calves were largely born in spring on green pastures. These are still available to the breeder. The calves had an abundance of sunlight and air, which are just as abundant now and are just as free except when the breeder shuts out the light and air, as he frequently does. Calves then had plenty of whole, clean milk, if the cow yielded that much. Cows still yield plenty of whole milk—more by far than formerly—and it is still possible for calves to get it clean, even when not allowed to suck. But they rarely get plenty of clean, whole milk. The first milk has no market value and just after calving, in the present infected state of our herds, there is a voluminous, infective discharge from the uterus, perhaps a putrefying after-birth hanging from the vulva and the filthy liquids flow down the tail and thighs onto the udder and the calf gets them in abundance in its first meal, whether it sucks the milk from the udder or it is drawn by a careless milker with dirty hands from the filthy udder into a none too clean pail.

The calf naturally has scours or pneumonia, or both, and perhaps dies. If it recovers, its blood probably reacts to the test for the Bang abortion organism. The calf is dirty, repulsive, unthrifty, its hair stands on end, it does not grow. In a little while the calf is placed upon skimmed milk because the whole milk is too rich, or upon some patent calf food which is warranted to be just as good as whole milk. Does any intelligent breeder believe that a heifer calf suffering from scours or pneumonia and severely infected with the Bang abortion bacillus, stunted and weakened during the first few months of its life, is thereby

made a safer animal to breed one year later? Does he even stop to think seriously, that while skimming the cream from the milk, he may also be skimming the cream from his herd? Does he desire to develop a calf with a skim milk constitution?

Most breeders of pedigreed cattle make a great point of selling to the public a high quality of milk. Frequently they recommend it especially for young children because of its purity, yet that same milk may be killing the calves to which it is being fed! It might be well to make a score card for a dairy with special reference to the value of the milk for young children by considering the question of how the milk agrees with young calves. If it kills them, suspect its quality. If the tails and buttocks are soiled with feces, perhaps the milk might have an injurious effect upon infants.

In earlier days, cows had better opportunities to really be clean. Out in the open air they enjoyed somewhat frequent baths, especially in the rainy season. The dirt and filth was washed away. The breeder of today can readily and at slight expense provide suitable equipment by which thorough bathing may be available, and from our observations, we believe it valuable,—worth far more than disinfecting gutters and stable floors. We are not so tremendously afraid of the ever-present infections in the gutters so long as the cow is clean. Abortion bacilli have never been known to seriously injure a gutter.

If the question is carefully studied, it will be found that the breeder of pedigreed cattle of today can retain all the milk-producing efficiency he has now and yet apply all the essential elements which rendered the outdoor herd of half a century ago so highly efficient in breeding. He can have for his cattle plenty of sunshine and air; they can be afforded plenty of exercise; with our improvements in transportation, good and abundant food is always in reach; good water for drinking and bathing are available; there is plenty of good milk for calves and the milk is probably cheaper today in proportion to the value of the calves than it was fifty years ago; our means for securing cleanliness are far better now, and at every turn the breeder is better equipped for successful work.

In spite of all this, these fundamentals of hygiene are ignored, infection is invited, and when the infection of abortion acquires

great virulence in the herd, and losses from abortion, sterility, retained afterbirth, calf scours and the others, strike the owner as an overwhelming and disastrous storm, threatening financial ruin, he frantically looks for some magic wand with which, by a single stroke, he can wipe away the legitimate results of ten or twenty years of error or neglect. Neither White's Sure-Pop Abortion Cure, Black's Panacea for Sterility, Jones' Infallible Expeller of Retained Afterbirth, nor Smith's Great Scours Remedy will save him. Neither will the newfangled vaccines nor the agglutination and complement-fixation tests stem the disaster. The causes are too deep. The negligence of years has slowly created too deep-seated a disease.

Sometime, some wizard may discover a wonderful cure for this malady, powerful enough to overcome the forces of neglect, error and avarice. Pending such an unexpected discovery, we advise that the breeder shall begin with his new-born calves and, by the application of well known hygienic rules, keep his animals throughout their lives, clean, healthy and vigorous. The best preventive or remedy known against abortion and sterility is a strong, vigorous constitution and clean genital organs. A cow that, throughout her breeding history, has shown sufficient vigor that each service has been followed by a pregnancy, each pregnancy has continued about two hundred and eighty days and terminated with the prompt birth of a vigorous calf, the after-birth following completely in an hour or two, is better than any abortion or sterility cure, far more immune than an aborter can be made by vaccines or methylene blue.

Some time since we issued a circular (Circular No. 4, New York State Veterinary College at Cornell University, April, 1914), outlining a plan for the hygienic handling of herds with a view to preventing this group of losses and it has been cheerfully sent to all enquirers. Very few breeders give it serious attention. Most breeders are still looking for a safe, cheap, quick cure which no one but the charlatan has to offer. A few breeders have followed the plan described in our circular, for several years, and the results have been satisfactory.

Turning especially to the subject of sterility for a brief time: Here, too, breeders have looked for some wonderful cure not based upon the fundamental nature of the disease. Sterility

is caused by an endless variety of conditions, only a very few of the most prominent of which we shall be able to mention.

In order that a cow may breed, her genital organs need be sound in structure and function. The ovaries must be healthy and must periodically ripen and discharge healthy ova or eggs. The oviducts or egg tubes must be open and permit the male cells to travel through them up near to the ovary to fertilize the egg and this must then pass downwards through the tube to the uterus where it is to develop into a fetus. The vagina and vulva must be normal in order that copulation may occur. Any disease or abnormality in any one of these parts may prevent conception and cause sterility. Among the fundamental causes of sterility, the infection of contagious abortion readily takes first place, so far as can at present be determined. This infection is at least suspected to be directly or indirectly the fundamental cause of most cases of ovarian, tubal and uterine disease.

When a cow comes in heat, there soon follows the rupture of an egg sac and discharge of an egg. The rupture leaves a cavity which is quickly filled by a dark red substance, later becoming chocolate or yellow in color, coming from the walls of the ruptured sac, forming a solid roundish mass, normally about seven-eighths of an inch in diameter. If the animal is not bred or fails to conceive and the ovary is healthy, this yellow body, as it is called, retains its original size for about eighteen days, when it rapidly disappears and at about twenty-one days a new egg sac ripens and the cow again is in heat.

If the animal is bred and conceives, the yellow body remains at about seven-eighths of an inch until pregnancy terminates in abortion or calving and usually for thirty to sixty days later, when it disappears and the animal again comes in heat.

If the egg discharged is not healthy, if the egg sac itself was diseased before rupture, the yellow body undergoes disease. It may become enormously enlarged and in such case remain for a long period of time, even for months, preventing heat, and misleading the breeder into the belief that the cow is pregnant. More commonly by far, a cyst, filled with a clear liquid, forms in the center of the yellow body, gradually enlarges until it may reach a diameter of two or three inches or even more. When such cysts are present, they usually disturb the functions of the ovary

so that no healthy eggs are matured. If the cysts in the ovaries become extensive, the cow loses condition, the ligaments of her pelvis relax and fall, and she is in heat irregularly or constantly and becomes what is termed a "buller." When taken fairly early, the rupture of the cysts by the surgeon relieves the disease in a large percentage of cases and enables the animal to breed.

The oviducts or egg ducts leading from the ovary to the uterus, through which the egg must pass, occasionally become blocked. Sometimes they are distended with clear fluid, the cause of which we do not know. At other times, especially following retained afterbirth, the oviducts are filled with pus. These diseases are incurable and when recognized as involving both tubes, the animal can only be sent to the butcher.

Inflammation of the uterus, frequently associated with retained afterbirth, is a common and often obstinate cause of sterility and calls for careful management. When retained afterbirth is present, it should receive very careful attention. When it can be completely removed, this should be done, but generally it can not be removed. It is then necessary to defer action. But the case should be followed closely, not only until the membranes finally come away but until all discharge ceases. The uterine cavity itself requires frequent douching; any accumulations of pus require removal; the uterus needs to be massaged; the ovaries should have proper surgical attention; and, if need be, the general tone of the animal's system should be improved.

We hear much among breeders and some veterinarians about "closure of the womb" as a cause of sterility and of its cure by "opening." The cervix or neck of the uterus in the cow is very rigid, the channel through it is tortuous and extremely narrow. In a healthy cow, except about the calving period and during heat, the walls of this canal always lie in close contact. A man cannot, without employing great and dangerous force, pass his index finger through it and it is so tortuous and interrupted by folds of mucous membrane that even a probe will not ordinarily pass forward. So a man unacquainted with the normal structure draws the conclusion that he has here found the cause of sterility. He is not aware that the male cells from the bull, after passing through this "mouth of the womb," must still traverse the yet

more tortuous and narrow oviduct before impregnation can occur. This oviduct or egg tube is so narrow that it barely admits the passage of a horse hair and is so coiled upon itself that even the hair will not pass until the tube is dissected out and stretched until the coils have disappeared. It would appear, therefore, that if the male cell must pass through this small and intricately coiled tube which will at best merely admit a horse hair, it is scarcely necessary that the "mouth of the womb" should freely admit a man's finger or a broomstick in order that a cow may conceive.

We examined carefully on the killing floor the genital organs of 3,300 cows and heifers and among these we discovered one in which there was actual obstruction of this canal, which would prevent conception, and in that one case "opening" would not have rendered breeding possible. The breeder has constant and dependable evidence that the canal is not closed as related to breeding. After each heat period, especially if the cow does not conceive, there occurs on the following day a discharge of blood — menstruation — which comes from the cavity of the uterus. The blood cells themselves are as large as the male cells, and while the blood cells are dead and in clots, the male cells are living and move actively. Hence, if the menstrual blood can escape from the uterine cavity, the semen of the bull can readily penetrate the uterus through the same passage.

In any general plan for handling sterility, we need also to look to the condition of the vagina. In the present state of our cattle, practically every cow and heifer has a considerable vaginal infection with variable discharge. As a rule it does not directly interfere with impregnation but may indirectly be of great importance because such infection may at any time pass from the vagina, through this canal into the uterine cavity, and especially is this true at times of heat. This is borne out by the general observations of veterinarians dealing with sterility. If we can wash out the uterine cavity of a sterile cow, whether she has recently aborted or not, and the other parts of her genital system are sound, she conceives and carries her calf normally. So we advise as a rule of practice the douching of the vagina. This cannot overcome an infection which has already entered the

uterus but can only tend to prevent such invasion. It is not a panacea but only a modest help.

A second important group of cases of sterility are those due to tuberculosis of the genital organs. Genital tuberculosis is a comparatively uncommon form of this infection in cows, occurring possibly in one or two per cent. of tubercular animals. The disease usually involves the uterus and egg tubes; very rarely the ovaries. The internal genital organs usually become adherent to the surrounding organs and largely through this may be recognized by rectal examination. There is usually a discharge of pus from the uterus, soiling the tail and buttocks. The cows usually are in heat more or less regularly. They are generally hopelessly sterile. That, however, is not their worst feature. Their sterility causes them to be bred repeatedly and the existence of tubercular uterine catarrh makes these cows a serious menace to the herd bull. Indeed, according to our observations, the cow with tubercular uterine catarrh is the most dangerous tubercular animal which may exist in a herd.

The copulatory act by the bull and the delicacy of the covering of the penis, render the presence of highly virulent pus in the genital canal of the cow extremely dangerous, the tubercular infection readily securing entrance into the tissues. In a little while the breeder notices that the bull copulates with difficulty or not at all, being unable to protrude his penis. The penis is seen to be inflamed and swollen. Swellings appear alongside the penis and the bull is quickly totally disabled.

In our experience more valuable herd bulls are totally ruined in this manner than from any other one cause and it is almost always traceable to repeated copulations with a cow hopelessly sterile from uterine tuberculosis. Natural economy demands that valuable pedigreed cattle infected with tuberculosis be retained in our herds, under proper safeguards, for the value of their offspring, but it is extremely important to watch closely for signs of uterine tuberculosis and promptly to exclude any cow thus affected. Tubercular cows held for breeding purposes should be frequently examined by an expert veterinarian for tuberculosis of the genital organs and upon the first evidence of uterine tuberculosis, they should be promptly destroyed.

CHAIRMAN: The meeting will stand adjourned. To-morrow morning, Wednesday, from 9 to 11, meetings of the State Breeders' Association and of the State Dairymen's Association will be held in this room and on the other side of the hall. At 11 o'clock a joint meeting will be held in this room.

Meeting adjourned.

## SECOND SESSION

WEDNESDAY, DECEMBER 16, 9 A. M.

### MEETING OF STATE DAIRYMEN'S ASSOCIATION

#### DISCUSSION OF CHEESE PROBLEMS

The second session of the convention was called to order at 9:15 A. M. in the convention hall of Hotel Seneca, with President H. C. Elwood presiding. Attendance, about two hundred and fifty.

President Elwood announced committees as follows:

*Committee on Auditing.*—George A. Smith, C. E. Sackett, M. C. Gregory. (To meet at Room 209 at noon.)

*Committee on Resolutions.*—W. N. Giles, George C. Hogue, E. L. Jones, H. E. Lange, Harry E. Jones.

*Committee on Legislation.*—Clinton H. Horton, Harry B. Winters, H. L. Grant, Fred W. Sessions, W. E. Dana.

*Committee on Cow Testing.*—Edward van Alstyne, A. J. Nichol, H. E. Babcock.

*Committee on Extension.*—Chas. H. Tuck, H. E. Cook, F. W. Howe, F. G. Hellyar, W. J. Wright.

*Committee on Nominations.*—W. P. Schanck, R. S. Bennett, J. F. O'Brien, W. J. Peach.

*Committee on Tuberculosis Legislation.*—W. E. Dana, W. A. Stocking, Jr., H. W. Collingwood.

After the announcement of the committees, Chairman Elwood introduced George E. Hoag, as chairman of the meeting for the discussion of cheese problems.

MR. HOAG: I did not think, when your secretary and president wrote to me in this connection, that I should be asked to preside; they simply asked me to take charge of making up the program. The president just now informs me that he expected I would preside at this meeting.

It is unfortunate that our session comes so early in the morning — not for me, for I am always up early; but some of the

other members who live in other parts of the state do not get around so early in the morning. Otherwise we would have been here at 9 o'clock.

Growing out of the scoring of the cheese at the State Fair, a discussion followed, and it seems to me to be a very good plan — and was suggested by others also — that we take up the question of the most common defects found in the cheeses scored at the State Fair, and also to see if these cannot be remedied, and the standard brought out. We have a few speakers who will take part in the discussion along these lines.

Mr. Sweetland of South Dayton has prepared some Round Table questions, and I think we should all have a set of these questions before we begin. We will have the Round Table later on. I want you to be thinking them over, and if you can find any other questions of interest in addition to these please hand them in at the time of the Round Table.

We have with us Professor Fisk, from Cornell, who was at the State Fair, and assisted in scoring the cheese there, and we will call upon him first to tell us of the most common defects found there.

W. W. FISK: Before I come to cheese itself, there are one or two things I want to speak about.

The first is the breaking of the boxes in shipment. Many of the boxes get broken in shipment, allowing the cheese to become dirty, and while this condition is usually noted by the judges — their attention being called to the fact that the cheese was probably not dirty when made — still, the appearance at its arrival influences the judges to a certain extent. If it seems doubtful in character and dirty, it would have an influence on the judge. This can be remedied, I think, to some extent, by putting better cap cloths and bandages on the cheese, which can be taken off when they reach Syracuse. The cheese will then have a clean, attractive appearance. I notice that some men have it all wrapped up in burlap sacks, and it arrives in good condition. Something about it appeals to me as a very good thing. Someone else has to unpack it, but it comes in good condition to me.

There is another thing. A great many of the tags that are sent out by the State Fair Commission are simply tacked on the boxes, either cover or side, with long tacks, which go through the boxes.

sticking into the cheese and giving it a bad appearance. This usually results in scoring off to some extent.

One thing more before we come to the cheese — the judges may be defective. We have known of such. In the first place, the cheese judge ought to be a broad man in the cheese industry, and one who is willing to lay aside personal taste. A man who goes to score cheese, no matter what or where, and simply scores it on personal taste, will never find many cheeses that come up to his ideas. The cheese should be scored on the market basis. Take for example, a white and a colored cheese. If a man should be biased, he might score off for color or whiteness, but what we want is a man who knows that we want a uniformly colored cheese, and so long as the color is uniform throughout, a perfect score should be given. The judge must be familiar with the market, and know what is standard.

Now coming to the cheese problem — you are all familiar with the score card. It is simply a numerical value placed upon each cheese. Flavor is given 50 points, or one-half the total score of the cheese, so that with a perfect flavor one should get 50 points. Body and texture is 25 points, color 15 points, and finish 10 points, making a total of 100 points.

Give any cheese judge one cheese to score, and it is almost impossible to score that one cheese. What a man must do to score any cheese is have a standard. He should go over a certain number of them, find how the quality runs, and set his standard. If this is too low, the score will be proportionately low and vice versa. We have had that condition as well as too high a standard.

We really can classify defects of cheese into four distinct classes — defects of flavor, body and texture, color and finish.

We will start with the finish. To this is allotted a score of 10 points. There is no reason why a man should not get practically a full score or a very small percentage cut on finish. The finish simply means the style of the cheese and the appearance or make-up, and this is entirely within the control of the maker. In the finish, one can get a pretty good idea of the characteristics of the cheesemaker, and also the condition of his factory. If you get a cheese which is dirty on the edges, it is a pretty good indication that the cheesemakers' shelves are dirty. If you find wrinkled bandages, he is a careless sort of cheesemaker. The

worst defects we have along this line are a dirty surface, dirty edges, wrinkled bandages, and cracked rinds. This last comes from the fact that the cheesemaker takes off his cap cloths when shipping, and when the destination is reached the rind has become cracked. If left on, this would not occur.

There is another matter that I want to speak about, and that is the use of too much bandage. This not only makes the cheese look bad, but it is also wasteful. If he wraps one and one-half inches more than is necessary, he is using up two or three inches of bandage, and that is a waste.

Trimming the bandage is another important matter. A number of cheese factories trim the bandages, and in doing so cut down into the cheese, and this leaves a mark all round the cheese where cut.

Another thing which I think we should make uniform at the State Fair is paraffining. Some cheeses are paraffined and some not. In paraffining a large number of defects can easily be covered up. This covers up wrinkles, etc., and the judge will not note them so easily. I think it should be more uniform.

So much for the first class of defects. Now the second class, the color.

These, like the first class, are entirely under control of the maker. There is no standard of color in cheese, so that any shade or color which the market demands is all right, but that color must be uniform. If not, the color is defective. The most defects we have in the color are seamy color, mottled colors, (probably due to moisture) acid-cut colors and colors which in the estimation of the judges are too high for any market. There is no reason why the cheesemaker should not receive almost a perfect score on the color.

Now the third class of defects — the body and texture. To this is given a score of 25 points. The body and texture of the cheese, while almost entirely determined by the cheesemaker, is influenced to a certain extent by the quality of the milk. If you have gassy milk you are quite likely to have an imperfect cheese. The other two, the finish and color, are entirely within the control of the cheesemaker, or one-fourth the points.

In going over the cheese at the Fair, we found that most of the difficulties in the body and texture was with the moisture,

supplied in the form of whey. I believe that the greatest lack to-day in the cheese industry is a quick test to determine the amount of moisture in the cheese curd. If there were a quick moisture test to determine the percentage of moisture, we would then be able to make cheese by rule, and this is where the skill of the cheesemaker comes in. He must use his own judgment, influenced entirely by the feel, smell and looks of the curd. For that reason we have a great variation in moisture in cheese, because each maker will have his idea of the amount of moisture and one maker may put in a lot and another cut it down. The body and texture is entirely influenced by the moisture content of the cheese. We find that some cheeses have too much moisture, and these, when broken down under the thumb are soft and pasty; while some are too hard. For every curd I believe there is a point where there may be the maximum amount of moisture to give the best texture, and this is where the art of the cheesemaker is shown. If he does not know how much to put in, he may have a dry cheese.

Aside from the pasty texture and the hard, dry texture, we may have an acidy cheese, also due to moisture. The moisture is in the cheese in the form of whey, and this whey contains the milk sugar. This may, and will later change to lactic acid, due to the action of the organisms present, and this brings up the point that a good many of the cheeses shown at the Fair when they were made may have been sweet, but in trying to get a soft texture the cheesemaker has put in a lot of moisture and the milk sugar changes to lactic acid and gives sour cheese. This leads to a difficulty we often have with the cheesemaker.

We must have a good cook on the cheese. When I say that I do not mean necessarily a high cook. I remember I told one of our students he was not cooking his cheese enough, and as a result got a hard, dry texture, so he cooked it up about 110. I do not mean high temperatures, but sufficient to form the curd. After we have a firm curd, we can reabsorb the moisture, so the cheese will become soft. If the curd is not properly cooked there will not be much texture to it. If the curd is not cooked an acidy cheese is apt to result, because the curd will hold so much moisture in the form of whey.

In a washed curd cheese there will be a soft texture, simply be-

cause in this there is not so much moisture to later turn to lactic acid. That is one of the factors in making the wash curd cheese — there is little sugar to make a sour cheese. However, it may get soft.

Some other defects listed as body and texture defects are, a lumpy texture and open texture, which may be due to gas or yeast; and we have acid textures, due to the development of too much acid.

Another fault: quite often a man will make an export cheese and a home trade cheese out of the same vat, ship to the Fair, get a different score, and say the judge is not fair. In export cheese more body is required; so if these cheeses were made in the same vat, still they would not score alike in different classes. If the cheese is soft in texture, it will be scored off because of this, and vice versa.

So much for the defects of body and texture. This gives practically half the score of the cheese which is practically within the control of the maker. If the cheesemaker knows his business and is making good cheese, there is no reason why he should not receive one-half practically perfect.

The last class of defects is in the flavor. In this the cheesemaker does not have full control, because the flavor of the cheese is largely determined by the flavor of the milk. Of course he can help by the proper selection of his milk. After the milk is in the cheese vat, the flavor is largely determined by the flavor of that milk. In this class of defects I might say the cheeses show a great variety of flavors. Probably one of the most common and most objectionable is the fruity flavor. This may be more or less pronounced, but a great many of the cheeses show this defect. In cheese taken from the State Fair and put into storage, and scored the other day, I was surprised to find so many with a fruity flavor. What caused this I shall not discuss, but I believe most of the cheesemakers see this is one of the worst defects they have.

Then we have cheese which has a bitter flavor, and some an acid flavor, and flavors which come from the use of old milk; and we can cover up a multitude of sins when we say many show a tainted flavor. However, we have some cheeses which show a really good cheese flavor.

There is one thing which I believe the average cheesemaker

can do to control the flavor,—and there are two sides to the question—that is, the use of a starter.

There are four objections to the use of a starter:

In the first place, a cheesemaker may not know whether or not he has a good starter. If his starter is off flavor, he is simply adding to his trouble. He should know whether or not it is good, or he should not use it. If gassy, it will cause considerable trouble.

The second objection is that the cheesemaker learns that it hurries things along, and naturally he will use a little more, and more, until finally the day will come when he will make a sour cheese. This must be guarded against.

The third objection is that the milk may come to the factory so sour that the cheesemaker cannot use a starter. I do not believe the best quality cheese can be made from that type of milk.

The fourth objection is that the use of a starter is wasteful, because the milk put into the starter does not go into the cheese, for rennet will not work on milk worked on by acid. Some cheesemakers will argue on this point.

In the first place, if we have a good lactic acid starter, it tends to improve the flavor, and this is what we want. Sometimes it is a great help in overcoming gas. I do not think there should be any argument on this point.

Second, it helps in the texture. For example, if there are organisms present which are producing slime, and which make a poor texture, the starter will tend to overcome these things and give a better texture.

I believe that at this time New York State is in a critical condition in regard to its cheese, and if we are to maintain the reputation which we have for good cheese, and which Wisconsin is after very sharply, we must make good cheese. This does not mean quantity; it means quality. New York and Wisconsin are very close on the quantity of cheese which they make, and I believe there is no reason why New York State cannot make better cheese than Wisconsin. If we are going to make a good cheese, we must have good sweet milk and must use a good commercial starter. If we do not do that, we cannot make the best possible cheese. I believe the quality of the cheese can be no better than

the quality of the cheesemaker and the milk from which it is made.

MR. HOAG: This lecture brings one particular point to my mind, which I think might well be emphasized, and that is that every cheesemaker should send a cheese to the State Fair, and then he should know just the reason for the points he gets on it. I believe this would be a great advantage. I know all of you have a great many questions to ask, but we have another speaker first. I want to introduce John L. Gibby, of Arcade.

MR. GIBBY: This is entirely a surprise to me. I did not know I had to say anything along this line. I think Prof. Fisk has covered this question of defects in cheese quite thoroughly.

Many defects we found came from too much moisture. Of course the flavor of that was off. A great deal of that was caused by poor flavor of the milk, and some caused by too much moisture in the manufacture of the cheese.

About the fruity flavor — that is a question. There has been a great deal of discussion as to what is the cause of that fruity flavor. This tendency was more pronounced in some cheeses than in others. I think the decision of most of us was that it might have been caused by the use of a poor starter. When I find a fruity flavor I am inclined to look for a filthy whey tank. This is one thing I think the cheesemaker should look after, to see that his whey tank is kept clean. It will be a benefit to him as well as to the farmer. He will get better results. There is generally some farmer who is not so particular about washing the can. Some leave the whey until just before milking at night, and they bring back the same flavor next night.

Mr. Fisk brought up one thing about the boxes. I had most of the cheeses to unpack, and found a lot of tacks driven right down into them. If you have a one-half inch tack and a one-quarter inch board, it will tear the cheese, and the maker should lose off for this. He is properly to be put down for this lack of care. I do not know that there is anything further to say, is there, Mr. Hoag?

MR. HOAG: What about the starter that Prof. Fisk spoke of?

MR. GIBBY: It is a good thing if properly used. Some use too much in order to hurry it.

MR. HOAG: What have been your observations in the use of a starter?

MR. GIBBY: It is good, if properly used. You will find some of the best makers are using a starter and making fine cheese. They must use judgment, however, and know it is right, and when not to use too much. You will find makers using 3 per cent. or more.

MR. RICHARDSON: How about it under gassy conditions?

MR. GIBBY: Use more. You must overcome the gas.

MR. LANG: Would it not be better to change the milk?

MR. GIBBY: Yes, if you will find milk which is better.

MR. HOAG: Any other questions?

MR. ISABELLE: I should like to ask the speaker, if one tested the milk with the Wisconsin curd test and found gas to-day, would he find it the next day from the same man?

MR. GIBBY: Not always, but as a general thing.

MR. ISABELLE: If you follow this man up, and find everything in good condition at his place, what is wrong?

MR. GIBBY: Test out his cows. You might find it in one cow.

MR. HOAG: Could it not sometimes be in the strainer?

MR. GIBBY: Quite often. This is one of the greatest questions we are confronted by. A strainer is made by the Lisk people which costs fifteen cents a month, and is used but once. This is the best strainer I know of. It has a collar that fits down close, and holds the outing flannel strainer in place for the one using.

MR. ISABELLE: May I ask for the address of the people who make this strainer?

MR. HOAG: Lisk Mfg. Co., Canandaigua. This strainer is cheap, and does away with the "dishrag" flavor.

MR. ISABELLE: I should like to ask if you have not found trouble from cloth strainers?

MR. GIBBY: Yes, from not being properly washed.

MR. ISABELLE: What is the cost of this strainer?

MR. GIBBY: One dollar and twenty-five cents, or a little cheaper from the Lisk people.

MR. FREDERICKSON: I should like to ask how the amount of starter is to be determined? I think the main objection to the starter is the use of too much of it.

MR. GIBBY: In order to get what is needed, you should use a test. The question of how much depends upon your milk, and upon the rennet. Some test must be used, for the milk must be right. Later comes your acid test. I do not believe it is quite so much the amount of starter you use as the time you leave the milk —

DELEGATE: How will a cheesemaker know how much to use?

MR. GIBBY: He can tell by how his curd is working; by the firmness of the curd.

DELEGATE: How long should that be?

MR. GIBBY: Two and a half to three hours. I think he will get the best results from the latter.

MR. HOAG: Gentlemen, any more questions? I want to introduce a gentleman from Delevan, who at one time owned fifty factories, Mr. E. L. Jones.

MR. JONES: I thought that our chairman had overlooked me entirely, and did not intend to call on me, and I will say that the points I wished to take up have been largely gone over already, and I am not going to worry your patience with a long argument. There are just a few things I wish to say.

Prof. Fisk spoke in regard to the appearance. Now I wish to add a little extra relative to that. As to the appearance of the box, we should see that it is good, not shrunken in.

The next thing, we should see that the farmer who hauls the

cheese to market has a clean wagon box in which to haul the cheese. I have often gone to a car and found the boxes so filthy — they looked very much as though they had been hauled through the gutter. If any of you would go to the storehouse and see a box in such a filthy condition as that, no matter how well the cheese is made, I doubt if you would want it for that reason. Have some particular man haul the cheese, and have it understood that that man will have a rig in the best of condition every time for hauling the cheese. Otherwise the result is not satisfactory.

Another thing, the importance of the cheese is brought about by the cheesemaker. I agree that many of our cheesemakers will send their likeness just by the appearance of their cheese. When I see it black and in bad condition, as far as the outside is concerned, I understand the maker is not cleaning his benches after each setting. See that the benches are properly cleaned every day before the new cheeses are put there.

Now, the matter that I wish to take up is, "How to Improve the Quality of Our Cheese." I wish to say first, that we should insist upon better milk, and I think our Commissioner of Agriculture should see that our milk inspectors and cheese instructors in the district take this deposit test of the milk with the different factories, as well as to test the milk to see if it has been adulterated by the addition of water. I see no reason why we ought not to have just as pure milk to be made into cheese as to be used as milk. I think we should. I recommend that from now on every milk inspector appointed by the state to do that work be qualified in the cheese district to be fully prepared to give instruction in the manufacture of cheese, and that those already in the field should be required to qualify within one year from date or lose their jobs. Then, from the very nature of the case, we are to depend in the future upon the young men, men of little experience in the manufacture of cheese, because the cheese situation in this state is different than it has been. Young men will use it as a stepping stone to something else. When I was a boy the teaching profession was that way. So we must depend very largely upon the state helping out in that way.

Another thing — and possibly this is the cause of more trouble than anything else — is the use of too much rennet. Do not let the curd get too hard before cutting. Not more than two or three ounces of rennet should be used. I know men who used from three and one-half to five ounces and I knew of one gentleman who used seven ounces. I found nearly every cheese in that factory dripping the whey. Down at the old factory at Yorkshire I had a young man who was using seven ounces. It is a specific case,— D. J. Davis, of Delevan, is the man. I went there and I had him measure out just three ounces of extract and put it into the vat, at the right temperature, and I tested. In twenty-five minutes from the time the extract was put into the vat I cut it, and found it just right. Then I went on with the stirring, gradually putting on the steam. It took from a half to three-quarters of an hour to cook. Mr. Davis thought it would be ruined, but instead it was as nice a cheese as ever was made.

MR. HOAG: Gentlemen, any questions?

MR. RICHARDSON: I should like to ask how much milk, under normal conditions, should he use for a pound of cheese?

MR. JONES: That depends entirely upon the kind of milk we get and the season of the year. We have places joining each other where in one place it took twelve pounds on June 1 and another where we make it from ten pounds.

MR. HOAG: Why is that?

MR. JONES: Because Mr. Hoag and others have thought so well of a certain grade of cattle in this section. I tell you, gentlemen, we cannot make cheese out of water. To show how things have changed, thirty years ago I made cheese out of a trifle less than ten pounds.

MR. HOAG: Suppose we take  $3\frac{1}{2}$  per cent. milk, for example?

MR. JONES: I should say then, roughly, that it would take about ten pounds of that kind of milk to make a pound of cheese.

MR. HOAG: I want to say to you gentlemen, without any flattery to Mr. Jones, that his remarks are not founded on theory, but on actual practice. He is one of the foremost cheesemakers

of his section for more than twenty-five years. I must get back at him a little, however, by saying that when at Baltimore recently I discovered a fruity flavor in some cheese, and when I asked whose it was I was told it came from Jones. He must have bought it from some of his neighbors.

MR. CHANDLER: Something was said about some cheeses tested at the Fair showing more acid. That is altogether opposite to my experience. Very frequently we find cheese turned down for over acidity when shipped, but after being in storage for three or four months became the finest of cheese. I have had a number of such cases.

MR. FISK: What I meant to say was this, that when the cheese left the factory it might have been sweet, but when it arrived at the Fair it showed acid.

MR. HOAG: Mr. Chandler, did I understand you to say that cheese that was acid at ten days old would later become first-class cheese?

MR. GIBBY: Cheese that contains too much moisture will certainly go over-acid. I have seen them when they were so hard you could hardly break them down. Hold them for two weeks, and they get very acid. That moisture was sealed in there in the making of the curd.

MR. FISK: Do you think the acid will pass off?

MR. GIBBY: Some will and some will not. The spring cheese is the worst.

MR. JONES: In nearly forty years' experience in the manufacture of cheese I have never yet discovered a cheese that was over-acid that would ever be anything but over-acid cheese.

MR. HOAG: We will have to pass over this discussion now, and take up very briefly the Round Table. We have only a few minutes left now, as there is a joint meeting to follow this. Let me introduce Mr. H. S. Sweetland, of South Dayton, who will preside at the Round Table.

MR. SWEETLAND: We will take up the questions as far as we can. The first question is, "What are the causes of over-acid

cheese?" We have had quite a little talk about this already. I am going to ask Mr. Richardson to answer the question.

MR. RICHARDSON: I think the causes of this have been discussed until it is beyond my ability to add more to it. I think I could not add anything to what Prof. Fisk and Mr. Gibby have said. If we had more men who would come to this convention and talk along the lines of their experience, as Mr. Jones has, it would be a great advantage to us. My experience, however, has been that a cheese ten days old tests right in flavor. I am perfectly willing to release anyone who stands behind it at that time.

MR. SWEETLAND: We will take up question two: "What arrangement of returning whey to patrons produces best results?"

This is a very important question, and it is supposed to cover the location of the tank and the material from which it is constructed, and the method of pumping it or dipping it. Mr. Youngs, will you answer that question? What is your experience? Where are the tanks located?

MR. YOUNGS: Our tanks are usually located out of doors, and we try to keep them as clean as possible, scalding them out and scrubbing them two or three times a week, but it is hard work to get cheesemakers to take care of a tank.

MR. HOAG: A question has been handed in, about the quality of boxes, and the requirements of the railroad companies.

MR. RICHARDSON: Of course, Mr. President, the question of good boxes and poor boxes has been a mooted one for many years, and many that we are getting in some sections of the state are very poor. A few days ago, a committee of railroad men called on me, and stated that, during the coming season, certain requirements would be asked in the way of their manufacture. Hoop on top and bottom of the cheese, for example, and other requirements, which they would insist upon if they took the cheese. We informed them that was a question that would be back of us, that we had most of our cheese shipped in to the building, and that they would have to go back of us to the manufacturer of the boxes. Since that time I have been asked for the names and

addresses of box manufacturers in northern New York, with the idea on the part of the railroad company of making certain requirements in that regard.

We must have better boxes. I think we average 250 broken boxes a week, which we are obliged to replace. This is too many. Of course, when cheeses are shipped, if the railroad takes them and the boxes are in bad condition when they reach destination, the railroad theoretically is responsible for any loss, but any of you who have had to do with claims of this character know how difficult it is to get that before the claim agent in such a way as to get your pay. I handed this question in to the chairman for the purpose of bringing up the question, so if the manufacturers or salesmen are here, they will look after their boxes and see they are made at least in such a manner that they will be acceptable to the railroads. This matter was brought to us by the New York Central. If they adopt it, we will have to follow along those lines. If they object, the box maker must get more money for his boxes, but it is very necessary at the present time to consider this question.

MR. GIBBY: These are two other questions I should like to have talked over. We have had some little talk about the skimmed cheese matter. I think this should be taken up here.

MR. HOAG: In reply to Mr. Richardson, I believe there is a law similar to this out in the western part of the country, and as he says, I believe such a law is bound to come here. We should prepare for it now, and make proper boxes that will pass the test of the railroad company. This is a very important thing.

MR. SWEETLAND: We will now take up the third question —

MR. HOAG: We will have to close the discussion now, as we have run considerably over our time, owing to starting late, and there is a joint session waiting.

A DELEGATE: We ought to discuss getting better milk to the cheese factory —

MR. HOAG: I think we had better arrange for another session. We might go to another room and continue this —

MR. SWEETLAND: The next session is a joint session.

MR. SWEETLAND: I move that we continue this discussion at the close of the regular program this afternoon.

Motion seconded and carried.

Adjourned 11:15 A. M.

(Adjourned meeting of the State Dairyman's Association, for the discussion of the cheese problems did not convene at the close of the regular program, as that did not close until 4:55 P. M., and was to be followed shortly by the banquet. Chairman Hoag announced it would be held in connection with the butter discussion Thursday morning.)

#### JOINT MEETING OF DAIRYMEN'S AND BREEDERS' ASSOCIATION

The joint meeting was called to order at 11 A. M., Commissioner Huson in the chair.

CHAIRMAN: I have been requested to announce that the resolutions committee of the State Breeders' Association, of which Mr. Richardson is chairman, will meet in room 518 at 1:30 this afternoon. I hope all the members can be present.

Before taking up the regular program, and while waiting for the appearance of Dr. Williams, who is on his way, it may be profitable to spend a very few minutes considering some of the matters that doubtless will come before the next legislature, particularly in regard to the treatment of tuberculosis in cattle; and we can, I think, spend a very few minutes on that without encroaching on Dr. Williams' time.

DEAN H. E. COOK: It was said by a wise man some time ago that "fools rush in where angels fear to tread," and I imagine that may be the case at this time in raising the question of bovine tuberculosis before this body. Briefly, the situation — so far as action is concerned — is this: the Governor has appointed a commission to undertake, if possible, to work out a plan that will be useful to the livestock interests of the state, and, as well, to protect the consumers of milk. All have agreed that our present law is not meeting those conditions and that something ought to be done.

That part of it is easy. And after just outlining four sugges-

tions that have been made and are being considered by this committee, I am going to move, Mr. Chairman, that a committee be appointed from each of these two associations that are represented here to-day, the Dairymen's Association and the Breeders' Association, because these two associations represent the interests involved in this question.

The suggestions that have been made are these: that we undertake to pasteurize all of the by-products from our cheese factories and our creameries to 180 degrees temperature, if by flash pasteurization; or, if by holding, to at least 140 or 145 for thirty minutes, which is now being done, so far as I am able to learn, in two states. The State of Pennsylvania has a law of this kind and the State of Minnesota. If there are others I do not know about them.

Another point is: that we undertake to control the shipment of cattle and the handling of the disease by county units, or county systems, as we undertake now to handle the disease by state systems; that is, before animals are shipped, that they be subject to a physical examination.

Another question that has been raised is the free use of tuberculin within our state. Now, if we live up to the law (and I have been informed that not all of us have been doing so), we are obliged to report the use of all tuberculin. The situation seems to be that, as it stands to-day, we are incriminating the honest man; that is, the man who wants to know and is willing to come out in the open. On the other hand, the fellow who is willing to defy the law is able to get his tuberculin some way, and he finds out on the quiet what the condition of his animals is. He is profiting and the honest man is not profiting by it.

Another question being raised is relative to the physical examination of the cattle of the whole state.

There are at least these four things that are coming before this commission, and something will be done. I do not know whether my use of the English language or command of audiences will make you sense the situation as it is in the state, but I assure you that a bill with some of these recommendations will be put before the legislature this winter. A law that does not have the sanction of the livestock interests, and of the farmers of this state, will not be valuable — nor will it be practicable.

Every man on this commission wants to have the livestock interests respected, and wants to work out a law that will begin to do something. Maybe it will not do very much, but, as it is now, everyone agrees that in the control of the disease we are practically where we were twenty years ago.

I do not wish to take your time, and unless there is some discussion, Mr. Chairman, I am going to move — in order that we may have the situation in a more workable form — that a committee of three be appointed by the Dairymen's Association and a committee of three by the State Breeders' Association, to whom this commission may go and with whom they may cooperate in the working out of a plan that will have some efficiency in cleaning up the herds of the state of New York.

CHAIRMAN: You have heard the motion of Dean Cook. We can spend a few minutes in discussing it if you desire. Has anyone anything to say in regard to this motion?

I am very glad that Dean Cook has brought this question before these organizations, for I do not think there ought to be any change in the present law unless organizations of this character have to do with shaping it. I believe that they ought to have a voice, and a potent voice, in shaping the future policy of the state on this great question. We all agree that the present law controlling bovine tuberculosis is not accomplishing results that its original framers hoped, and that it is working to the disadvantage, in many cases, of the honest man who seeks to clean up his herd. That there will be some legislation on this subject the coming winter, is entirely probable. It seems that these organizations ought to have committees that will be in close touch with the situation — that will have some voice in shaping and forming the legislation that we will probably have on the subject. And I think it most desirable that committees should be appointed of active men of broad views, who really represent the dairy interests and the breeders' interests, and who can take an active part in forming the future policy of the state on this very important question.

Is there anything to be said in regard to this resolution?

MR. RICHARDSON: I want to make just one statement: I do not believe that any legislative committee, during the coming

winter, will consider this question to a conclusion without the opinion being expressed, before that committee, of these two associations and what I believe to be an association entirely in sympathy with it, the State Grange, and I arise to second the motion of Mr. Cook for the appointment of this committee.

CHAIRMAN: Is there anything further? If not, we will vote on the resolution of Dean Cook that a committee of three representing the Breeders' Association, and a like committee of three representing the Dairymen's Association, be appointed for the purpose of considering this question — to represent the respective associations on this subject. All in favor of the resolution please say "aye;" opposed, "no." (Carried unanimously.)

We will now take up the regular program, and I have the pleasure of presenting to you Dr. John R. Williams, of this city, who will discuss "Some of the Difficulties Encountered in Making High-Grade Milk, and Their Practical Solution."

#### **DIFFICULTIES ENCOUNTERED IN MAKING HIGH-GRADE MILK, AND THEIR PRACTICAL SOLUTION**

JOHN R. WILLIAMS, M. D., SECRETARY, MILK COMMISSION,  
ROCHESTER, N. Y.

The law which went into effect on November 16, 1914, requiring the grading of milk, will undoubtedly create a demand for high-grade milk. This demand will be met very largely by dairymen unfamiliar with the technical difficulties encountered in producing milk of high quality.

The law does not use the expression "high grade." It does define, however, three grades of milk, namely, "Certified," "Grade A raw" and "Grade A pasteurized," which must be produced under conditions, and which entitle them to be classed as possessing superior merit. The essential standards are as follows:

**Certified.**—Standards to be prescribed by medical milk commissions.

**Grade A raw.**—Cows tuberculin tested. Equipment and methods on farm must score at least 75 per cent. Milk must not contain more than 60,000 bacteria per cubic centimeter when delivered to the consumer.

Grade A pasteurized.—Physically healthy herd. Methods and equipment must score 68 per cent. Bacteria standard 200,000 before and 30,000 after pasteurization.

An ideal definition of high-grade milk is, that which is safe, clean, of good flavor and well balanced chemically. Safety is by far the most important quality. It means freedom from human and animal disease. Cleanliness means the minimum amount of visible dirt and the minimum number of bacteria. Flavor is important because it very largely determines the free use or the non-use of milk by the consumer. The butter fat content is important because with the flavor it is the chief index of quality to the consumer.

The machinery of the law is impotent to make milk safe. It only detects disease on the dairy farm after the contagion has been carried in the milk to the consumer. Thus the making of high-grade milk must become a matter of social consciousness with the producer. He must be a high-grade man. If he meets his duty squarely he becomes a benefactor to the community and is worthy of public esteem. Therefore, the producer wishing to build up a high-grade milk business must go beyond the law and protect his herd and farm employees from disease. This is best done by having the assistance of a local physician, preferably the health officer, and a competent veterinarian; also by careful and frequent inspection of employees and cattle. An employee with a contagious disease, even a sore throat, or a cow with an inflamed udder or any other disease should immediately be removed, no matter what sacrifice must be made thereby.

Sickness resulting from the use of high-grade milk will not here be considered, but I shall invite your attention to some of the factors which have caused us much worry and study on some of the certified milk farms operating under my observation. The questions of feeding, barn construction, dairy apparatus, manure disposal and so on have been studied thoroughly by the various experiment stations and the published investigations are freely available and probably familiar to you all. Consequently these points will not here be considered.

I wish first to emphasize the importance of breeding good stock and at the right time of year. One of our producers made the



FIG. 332.—DR. JOHN R. WILLIAMS





error of continuing to breed to a sterile bull with disastrous effects on the milk production of the herd. Two other producers bred their cows so that they were dry during the period of the year when milk was scarcest. It has a serious meaning to a producer if fifteen or twenty cows, representing from 100 to 200 quarts of milk daily, are dry when there is a shortage of milk on the market. Yet that has been the experience of these two usually competent producers.

It is important to breed good stock both from the standpoint of self respect and the pocketbook. The following table based on the records of three of our farms for the past year illustrates this point. The first herd is composed chiefly of scrub cattle and a few registered Jerseys. The second herd is very much better. It has about one-fourth registered cattle and the rest grades of fair quality. The third herd is composed chiefly of high-grade registered stock and a few carefully selected grades. In the first herd breeding has been indifferently carried on, in the second herd it has received more than ordinary attention, while the owner of the third herd is a breeder of national reputation. These three herds differ in size but are compared on the basis of twenty-five cows, which represents the size of one of them. These producers receive eight cents per quart for their milk, hence the average daily receipts of the first farm are \$16, of the second \$22, and of the third \$26. There is some difference in the overhead charges on these three farms, but it by no means offsets the wide difference in the receipts.

**COMPARISON OF DAILY OUTPUT OF MILK AND GROSS RECEIPTS ON THREE CERTIFIED MILK FARMS**

Data base on records for year 1914 and on basis of 25 cows

FARM No.	Average daily quartage per cow	Total daily output	Gross receipts daily	Difference in receipts between Farm No. 1 and Farms 2 and 3		Difference in receipts capitalised at 8 per cent
				Daily	Yearly	
1.....	8	200	\$16	.....	.....	.....
2.....	11	275	22	\$6	\$2,160	\$27,000
3.....	13	325	26	10	3,600	45,000

The fairly good herd on Farm No. 2 produced \$6 per day more milk than did the scrub herd on Farm No. 1, and \$4 less per day than the splendid registered herd on Farm No. 3. Or, to state it on a yearly basis, the owner of Farm No. 3 received \$3,600 more for his milk output than did the owner of Farm No. 1, and about \$1,400 more than did the owner of Farm No. 2. If these differences were capitalized at 8 per cent. with interest charges at 6 per cent. and amortization and other charges at 2 per cent., which would allow for the extinction of the herd in thirty-five years, the owner of Farm No. 1 could afford to invest \$27,000 to bring his herd up to the standard of the herd on Farm 2 and \$45,000 to approximate the standard on Farm No. 3. Similarly, the owner of Farm No. 2 might well invest up to \$20,000 if it would produce a herd as profitable as that on Farm No. 3. No claim is made that these figures are more than approximations for they represent the data of but a single year. The records for other years, however, are substantially similar. From a business point of view it would seem little short of an economic crime to make milk with, and propagate scrub cattle.

The next point I wish to discuss is the significance of the bacterial count. This is of immediate importance to the producer of high-grade milk because it is one of the chief determining standards of the state law. The main sources of bacteria in milk are dirty and careless methods of milking and of the subsequent handling of the milk, unclean apparatus and insufficient cooling. Occasionally, none of these factors will be found at fault and it will be discovered that there are certain cows in the herd which are prolific breeders of germs in their udders. I shall consider some of these problems in the light of our own experience. We are told that the cows should be carefully cleaned, but what does this mean? It may mean the entire labor of one or six men for the care of sixty cows, depending upon the zeal and methods of the producer. This difference in the amount of labor means a tremendous difference in the cost of operation. The truth is, we do not know how much labor is necessary and how much is valueless in the preparation of cows for milking. Since barn labor is one of the costly items in high-grade milk production, any light on this problem should be welcome.

Through the generosity of Messrs. Markham and Puffer we have established a laboratory on their certified milk farm at Avon, N. Y. In this laboratory we have been investigating the question of cleaning as well as other problems which concern the producer of high-grade milk. The bacteriological investigations have been carried on by Misses Linda D. Puffer and Ruth E. Dunsford; in the barn and cattle cleaning experiments we have had valuable assistance and cooperation from William T. Thornton, in charge of the herd.

A series of experiments were made to determine the effects of brushing and washing the udder on the bacterial content of the surface of the teats; also to determine the value of disinfectants in the cleaning of the udders. These investigations are as yet incomplete and too few in number to be conclusive; nevertheless they are extremely suggestive and will be briefly detailed.

The method of cleaning employed on this farm at the beginning of the experiments was as follows: the udders and flanks were kept clipped and the brushes of the tails were kept clean. Preliminary to the care of the udder the cows were given a thorough general brushing. Immediately before milking the udders were brushed, then, with a single pail of water, a worker would wash the udders of from six to ten cows. These were wiped as fast as the washing was completed with a square of cheese cloth which had been previously sterilized. The following experiments were undertaken:

Determination of the number of germs easily removed from the teats.

1. (a) After careful brushing and then (b) after washing from a common pail and wiping with a common cloth.

2. Experiment No. 1 repeated. Teats treated with an antiseptic solution eight hours previously.

3. Experiment No. 1 repeated. Cows were then milked, after which the teats were treated with an antiseptic solution and the tests made thirty-five minutes thereafter.

4. (a) After careful brushing, (b) each udder washed with a pail of clean water and wiped with a sterile cloth.

The tests were made as follows: After the brushing of each cow, the four teats were submerged for a few second in a vessel

containing 200 cubic centimeters of sterile water. This procedure was repeated with another container of sterile water after the udders were washed. These vessels were then taken to the laboratory and one cubic centimeter of the water plated on agar-agar and incubated at 37 degrees Fahrenheit for 48 hours, when the number of germs on the plates were counted. The results of these investigations are exhibited in the accompanying tabulations. (Tables at the end of article.)

While this study is too brief and the data too few to be conclusive or convincing, they suggest:

(a) That perfunctory washing loosens or frees from the epithelial layers of the teats more bacteria than it removes, so that more germs may be readily removed in the handling of the teat after the washing than before.

(b) That washing from a common pail may carry germs from one cow to another so that the process of washing instead of removing may add enormous numbers of germs to the teats. In this way cows with infected udders may be the source of infection for all other cows in the same group.

(c) That antiseptics apparently reduce the number of viable germs on the teats. It is uncertain, however, whether or not they are destroyed or their growth on the test plate merely inhibited.

(d) That by far the best way to prepare a cow for milking is to wash each udder with a pail of clean water and wipe the teats with a piece of sterile cloth. It is a serious question whether or not any other method of preparation for milking is of value. Unfortunately, this method requires more labor and the extravagant use of water and sterilized cloths.

The cow with a wasted or caked quarter should be looked upon with suspicion. In our investigations we found that nine out of twelve of such animals were bacteria shedders. The milk of these animals contains myriads of bacteria which will undo all the labors of the producer if the milk is added to the general supply. During the active stage of the inflammation the germs may come largely from the sore quarter, but later, in the stage of atrophy, the milk from the so-called healthy quarters may teem with them. No cow with a permanently diseased or dried up quarter should be kept in a high-grade herd. The making of milk with a low bacteria count with such animals is impossible.



IN THIS BARN THE COWS WERE WASHED IN GROUPS OF FROM SIX TO TEN. UDDERS OF EACH GROUP WERE WASHED FROM A COMMON PAIL. THIS METHOD IS OF QUESTIONABLE VALUE BECAUSE IT OFFERS AN OPPORTUNITY FOR THE SPREAD OF BACTERIAL INFECTION.



The question of sterilization of utensils and apparatus on the farm is one which is not easily solved. An effective sterilizer is one which will rapidly destroy all bacteria at a minimum cost without contaminating by taste or odor the apparatus which is being sterilized. Steam, as is well known, is the most effective agent. Superheated steam or steam under pressure is far more destructive of germs than flowing steam. A steam pressure sterilizer will accomplish in a half hour what will require three hours with the ordinary steam box, and do it more effectively. Germs which form spores are readily destroyed by superheated steam but are very resistant to steam as it flows from a boiler at a temperature of 212 degrees Fahrenheit. Steam cannot be confined under pressure in a sterilizer made of brick, tile, or wood. This will readily be appreciated if one reflects for a moment on the amount of force exerted upon the containing walls by steam under pressure. A sterilizing box of average size, 3 feet 6 inches wide, 6 feet high and 7 feet long, has a surface area of approximately 26,000 square inches. If this were subjected to a pressure of ten pounds per square inch, the steam pressure commonly used in pressure sterilizers, the walls of this box would have to withstand a force of 260,000 pounds or 180 tons. Obviously no box made of wood, brick, or similar material could resist this tremendous pressure.

There are few pressure sterilizers on the market for dairy use. Their high initial cost stands in the way of their general adoption, although their greater durability, the saving in fuel, and the more effective service rendered should in time offset the higher price. The sterilizer shown in the illustration is in use on the Markham and Puffer farm. It is made of glass enameled steel and thus is resistant to rust. It has been in use for six years and shows no signs of wear. It was made by the Pfaudler Company of Rochester at the suggestion of the writer.

If a producer himself wishes to construct a sterilizing box, there is certain information as to material and construction of which he should have knowledge. An efficient sterilizing box should possess the following qualities:

It should retain the greatest possible amount of heat, for a box which readily transmits heat through its walls will be uneconomical in its use of steam and fuel.

It should be impervious to moisture, for moisture not only lowers its capacity to retain heat, but it may also cause a rapid disintegration of the material used in construction.

In the following table is compared the heat transmitting properties of materials commonly employed in the construction of steam boxes. Galvanized iron and sheet metal are not given because they rust so quickly as to be worthless. Metal lath for the same reason should not be used. The materials are given in the thicknesses that are commonly used in steam box construction.

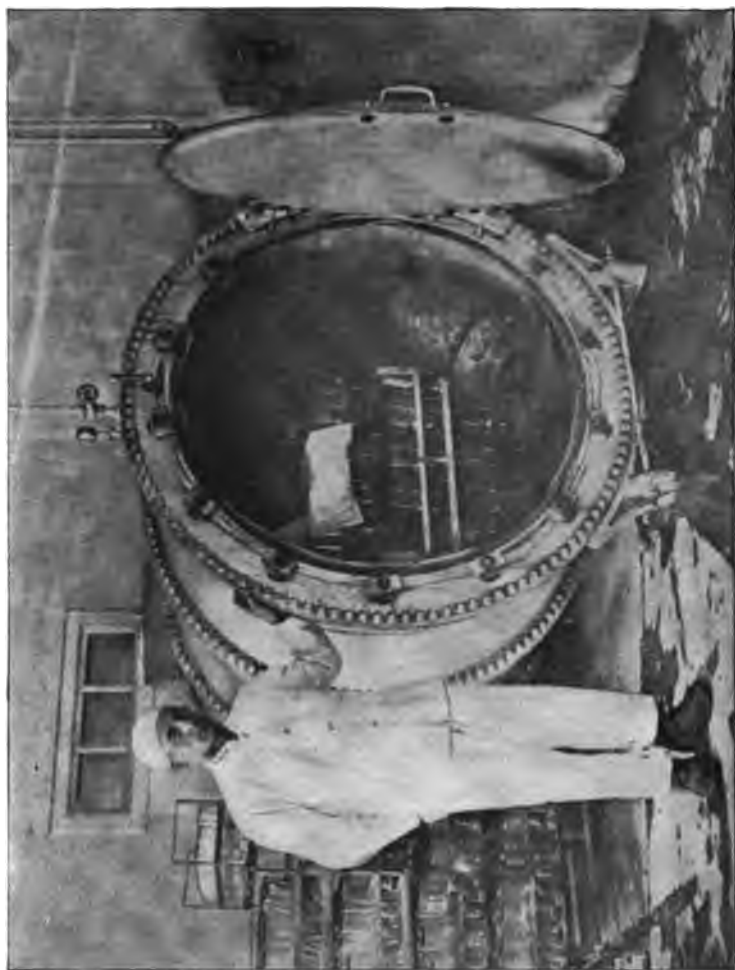
TABLE SHOWING INSULATING VALUE OF VARIOUS MATERIALS

MATERIAL	Heat transmission factor	Resistance to a passage of moisture
	b. t. u.	
8-in. brick wall .....	15.0	Very poor
10-in. concrete wall .....	10.3	Very poor
8-in. Hollow tile, glazed .....	8.0	Fair
2-in. Magnesia slabs .....	5.0	Good
2-in. cork board .....	3.1	Good

*Note.* By the heat transmission factor is meant the amount of heat which will pass through one square foot of wall surface in twenty-four hours. This is expressed in British thermal units (b. t. u.), which equal the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.

Thus it will be seen that eight-inch brick wall readily gives up its heat and is only about half as valuable as eight-inch hollow tile. From the standpoint of insulation the two-inch cork board is more than twice as good as the hollow tile, three times as good as concrete wall and nearly five times as valuable as the brick wall. Moreover, cork and magnesia markedly resist the passage of moisture.

Cork board would be the ideal insulator for a steam box were it not for the fact that after a year or two it tends to crumble, due to the action of the heat on the binder. We have employed it on one of our farms for four years and on another for two years with very satisfactory results. We have had practical experience with all of the above materials except the magnesia. One of our producers built a sterilizer of concrete and it was a complete failure.



PRESSURE STERILIZER MADE OF GLASS ENAMELED STEEL OF SUFFICIENT CAPACITY FOR A  
600-QUART DAIRY. HIGHLY EFFICIENT AND ECONOMICAL





It never could be depended upon. Another made one of brick, exposing three of the walls to the outside temperature. In very cold weather steam would condense on the walls and freeze as fast as it would flow into the box. It made a most unsatisfactory box and was very wasteful of steam. On another of our farms is a steam box made of hollow, unglazed tile. This is operated once a day, and, with the small amount of steam used for other purposes in the dairy, consumes about one hundred pounds of coal daily, a six horsepower boiler being used. The moisture passes readily through the tile and is objectionable. On another of our farms is a box insulated with two-inch cork board. This is also supplied by a six horsepower boiler, is operated twice a day, but consumes no more coal than the hollow tile box. The reason for this unquestionably is that the cork is a better insulator than the tile.

It will be found more economical in the use of steam if the sterilizer is built in the milk room so that all four side walls and the top will be surrounded by the warm air of the milk room. The door should be at least four inches thick and should contain two inches of good insulation, preferably cork board or magnesia slab. The edges should be rabbeted. The door is best held in place by cross bars operated like wedges. Hinges are unsatisfactory. Every steam box should have a good thermometer passing through the door, so that the milk room worker may know the temperature of the box, when he is sterilizing. Many times the high count of some of our producers' milk has been due to the fact that on cold days the box has not been heated higher than 150 degrees Fahrenheit, whereas it should be operated for at least forty-five minutes at 210 to 212 degrees Fahrenheit.

In conclusion, I should like to repeat for emphasis some of the important thoughts I wish to leave with you.

The making of high-grade milk is a matter of eternal vigilance and conscientious effort on the part of the producer.

Safety is the most important quality in milk. The surest way to destroy the milk business is to let the dairy farm become the focus for the dissemination of disease.

The making of high-grade milk with scrub cattle is uneconomical.

Producers should cooperate with each other in solving the problems which constantly arise in the business.

TABLE 1.—EFFECT OF WASHING FROM COMMON PAIL ON GERM CONTENT OF TEAT SURFACE, DEC. 1, 1914

Cow's No.	Number germ removed after brushing	Number germ removed after washing	Condition of udder before brushing	Order of washing
466 .....	19,000	43,400	Clean, clipped...	1st
345 .....	300,000	13,200	Clean, clipped...	2nd
337 .....	150,000	38,600	Dirty, manure...	3rd
475 .....	236,000	1,000,000	Loose dirt...	4th
470 .....	1,000	768,000	Clean, clipped...	5th

TABLE 2.—EFFECT OF WASHING FROM COMMON PAIL ON GERM CONTENT OF TEAT SURFACE, DEC. 1, 1914

Teats treated with antiseptic 8 hours before

Cow's No.	Number germs removed after brushing	Number germs removed after washing	Condition of udder before brushing	Order of washing
491 .....	77,200	200	Clean, clipped.....	6th
492 .....	5,000	41,200	Clean, clipped.....	7th
344 .....	41,800	1,000,000	Clean, clipped.....	8th
489 .....	8,400	38,200	Dirty, hair long...	9th
441 .....	300,000	140,000	Dirty, hair long...	10th

TABLE 3.—EFFECT OF WASHING FROM COMMON PAIL ON GERM CONTENT OF TEAT SURFACE, DEC. 5, 1914

Cow's No.	Number germs removed after brushing	Number germ removed after washing	Condition of udder before brushing	Order of washing
345 .....	57,600	32,200	Clean, clipped.....	2nd
337 .....	9,400	410,000	Dirty .....	3rd
475 .....	6,200	23,400	Clean, clipped.....	4th
470 .....	6,600	38,600	Clean, clipped.....	5th



**STEAM BOX MADE OF HOLLOW TILE. TWO-INCH WOODEN DOOR.**  
**THIS TYPE OF BOX REQUIRES FREQUENT REPAIRS AND IS**  
**NOT VERY DURABLE. IS FAIRLY EFFICIENT EXCEPT IN**  
**EXTREMELY COLD WEATHER. REQUIRES 100 POUNDS OF**  
**COAL FOR OPERATION ONCE DAILY.**

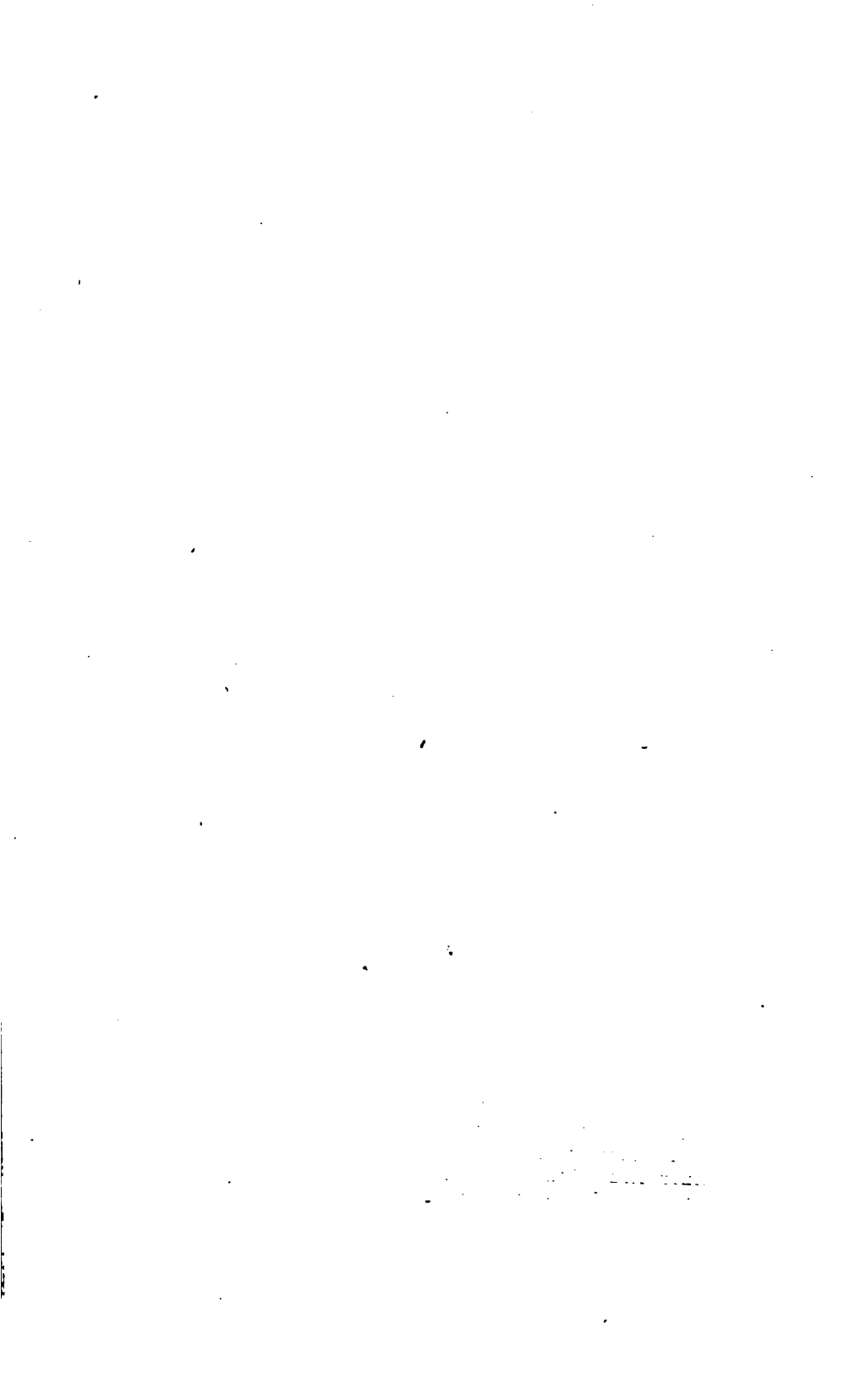


TABLE 4.—EFFECT OF WASHING FROM COMMON PAIL ON GERM CONTENT OF TEAT SURFACE, DEC. 5, 1914

Teats treated with antiseptic 8 hours before

Cow's No.	Number germs removed after brushing	Number germs removed after washing	Condition of udder before brushing	Order of washing
491 .....	19,200	16,000	Clean, clipped.....	6th
344 .....	6,200	5,600	Clean, clipped.....	7th
489 .....	6,400	8,000	Clean, clipped.....	8th
441 .....	61,400	8,000	Clean, clipped.....	9th

TABLE 5.—GERM CONTENT OF TEAT SURFACE BEFORE AND AFTER WASHING, MILKING AND THIRTY-FIVE MINUTES AFTER ANTISEPTIC TREATMENT, DECEMBER 7, 1914.

Cow's No.	Number germs removed after brushing	Number germs removed after washing	Number germs removed after antiseptic	Condition of udder before brushing
209 .....	184,000	112,000	4,400	Clean, clipped.
454 .....	12,800	85,000	200	Clean, clipped.
414 .....	7,200	93,800	1,400	Dirty.
451 .....	18,200	84,800	200	Clean, clipped.

TABLE 6.—TESTS BEFORE AND AFTER WASHING WITH CLEAN WATER AND DRYING WITH STERILE CLOTH UDDER OF EACH COW. ANTISEPTIC USED EIGHT HOURS BEFORE, DECEMBER 11, 1914.

Cow's No.	Number germs removed after brushing	Number germs removed after washing	Condition of udder before brushing
466 .....	5,000	1,800	Clean.
345 .....	24,000	800	Soiled with manure.
337 .....	20,000	800	Soiled, loose dirt.
475 .....	16,000	800	Soiled, loose dirt.
470 .....	1,200	200	Clean.

MR. W. E. DANA: Before you go I want to make two or three announcements. The Committee on Resolutions of the Breeders' will meet in Room 518 at 1:30. I also am asked to announce that Mr. Marshall, of the Health Bureau of the city of Rochester, will be in the lobby and will be pleased to meet any of the producers furnishing milk to Rochester and discuss problems with them. The department intended to have an exhibit illustrating its work, but when the exhibits were called off, it was called off. I also wish to announce that the secretaries of the two Associations are very desirous of having you purchase your tickets as soon as possible for the banquet to-night, so that they may know approximately how many intend to be there. I think we will have a good time, and I hope to see a great many of you there.

Meeting adjourned.

### THIRD SESSION

WEDNESDAY, DECEMBER 16, 2.15 P. M.

Joint meeting of the State Dairymen's Association and the State Breeders' Association, Mr. Elwood in the chair.

CHAIRMAN: With reference to the banquet this evening, it is absolutely necessary that we know at four o'clock the approximate number of those who will attend. I would ask all those who are present here to raise their hands if they are going to be with us to-night, so we can get at least an idea. If you have not your tickets, Secretary Brown or Secretary Griffith, or three or four of the dairymen or breeders, will have tickets. I should like to get a tentative count. The secretary can furnish you tickets at any time.

Your Commissioner of Agriculture has very kindly given me the privilege of introducing the next speaker. He is the only man in the city of Buffalo to whom I look up, and with a great deal of pleasure, I assure you. I now take pleasure in introducing to you Dr. Claris. And the Commissioner has reminded me that Dr. Claris has charge of the regulations and represents the Department west of Syracuse for New York State.

#### THE FOOT AND MOUTH DISEASE

DR. JOHN T. CLARIS, VETERINARIAN STATE DEPARTMENT OF AGRICULTURE, BUFFALO, N. Y.

Mr. Chairman and Gentlemen: Commissioner Huson has assigned to me a subject that at this particular time is very interesting, especially to the cattle men and farmers. I shall not given you an address, but just a little talk on what has happened during the past six weeks. My subject will be *Epizooticae* — *Aphthæ*, or Foot and Mouth Disease.

It is an acute, febrile, infectious, contagious disease of cloven-footed animals and is manifested by vesicles appearing on the skin and mucous membranes, especially in the mouth and interdigital spaces. It is also communicable to man, and especially to children.

The symptoms of foot and mouth disease: (I hope that none of you will have to see it, and if you do, I hope it will not be on your own farms). Probably the first symptom you will notice is a kind of languid appearance of the animal, accompanied by fever. In a great many cases the first symptom noticed is listlessness which is especially true in sheep and hogs but not so marked in cattle. Generally the first symptom in cattle is a flow of saliva in long, sticky threads from the corner of the mouth, and they make a characteristic smacking sound with the lips; I never visit any herd that I do not listen for that smack. Vesicles will form around the mouth, on the gums and around through the dental spaces. On opening the mouth these vesicles may be seen. They first appear like a blister — the size of a walnut or larger — and will last two or three days before breaking, at which time the parts will be very red: After that they will gradually disappear. In cows the udder will often be affected, especially the teats which will show practically the same lesions as the mouth. The animals will be in severe pain and, in some cases, if the hand is placed on the tongue large patches of mucous membrane will peel off.

If any of your herds become infected you will not be very long in doubt because the disease is so contagious; it will be only a matter of two or three days before a number of animals will be infected, one after another.

Another symptom, especially in a dairy herd, is a decrease in the flow of milk. I will read some figures — same being a record kept six years ago of a herd of 32 cows, some of which were going dry.

An infected bull got into this herd Oct. 27, 1908. On Oct. 31 the cows produced 465 pounds of milk; Nov. 1, 469 pounds; Nov. 2, 437 pounds; Nov. 3, 440 pounds; Nov. 4, 430 pounds; Nov. 5, 378 pounds; Nov. 6, 240 pounds; Nov. 7, 168 pounds; Nov. 8, 156 pounds; Nov. 9, 85 pounds; Nov. 10, 62 pounds milk. On the eleventh of the month they were destroyed.

In cattle the mouth is most often affected and in hogs and sheep the foot lesions are generally more pronounced. The healing process goes on rapidly and in the course of a couple of weeks only healed lesions are apparent and this is the most difficult stage at which a diagnosis can be made.



FIG. 333.—DR. JOHN T. CLARIS





The cause of the disease is a virus which is so very fine that it cannot be seen. The disease is very, very contagious and that is where the danger lies. It spreads more rapidly and easily than any other known disease of cattle, and is carried in every conceivable way; in the stable, pasture or yards; railroad cars; in the food; in manure, raw animal products and especially raw hides; by dogs, cats and birds. Sometimes it makes you wonder where you got it.

The germ is not isolated and retains its vitality in damp, dark places for a period of six months. Sunlight, the action of the elements and disinfectants destroy the virus.

When the inspectors visit a herd they have to be very careful; the average man does not realize how serious it is and when some of you gentlemen see us visiting a herd you think there is a lot of "tom foolery" about it.

Each inspector is clothed in a rubber coat, hat, boots and gloves, and, as a precaution to protect himself and that the complete sterilization of wearing apparel may be made before leaving the premises, his complete outfit is washed in bichloride solution and then fumigated with formaldehyde gas.

Just to give you an illustration of contagion: I remember one case in Monroe county. I went down there a little over a month ago, being telephoned from Albany just as I was leaving for Seneca Falls, asking if I would go down to Penfield as there was a reported outbreak there. I went there and the local veterinarian met me. We put on our rubber outfits and made an inspection of this herd. We found a serious outbreak of foot and mouth disease. I shall never forget it. There was a herd of dairy cows, about twenty in number, which were in the acute stage. Suddenly I heard a man crying: he said, "I know my cows have this disease and you are going to kill them and that is the worst thing that could happen to me. I am getting a start in life and now you come along and are going to kill them." I told him it could be worse — "You have a wife and children; transfer this disease into your house, would not that be worse?" I asked him all sorts of questions as to how his herd became infected; I asked him if he had traded cattle and he said he had not, but that he had bought a carload of cows in Wyoming county a couple of months ago. Just then his wife said, "John, five days ago twenty or thirty cows went down the road here and a heifer broke out

of our yard and went down after them." I ascertained that some of these cows had foot and mouth disease. I was on a state road and the heifer did not come in contact with them — simply happened to go over the road which was traversed by a herd having foot and mouth disease. That will give you an illustration of how contagious it is.

Another illustration I will quote was in Erie county, on the main road between Buffalo and Batavia. A Mrs. Lauer had foot and mouth disease in her herd in a very mild form; neighbor, Mrs. Hirsch, came over and the two women went to the barn, one to show the other how the cattle were acting. Mrs. Lauer not only lost her cows but Mrs. Hirsch also lost her herd.

These are some of the instances, and any person who is interested in cattle should keep away from any place where the disease is suspected to exist.

I was up in Tompkins county ten days ago to see a herd that was infected. The owner of this herd had a thoroughbred Holstein bull and a neighbor came two miles to see about this bull for breeding purposes. He did not touch any animal; he went back home, and his herd became infected. Both herds are under the ground to-day. That shows how easily the contagion may be carried.

Another source of contagion is from creameries where farmers take back the skimmed milk to feed to their hogs. I had a case not very long ago where a man took back skimmed milk; his hogs became affected and one of them broke out and went over into his neighbor's orchard. Not only did this neighbor's hogs become infected but the hogs of the farmer on the adjoining farm. We killed these hogs and buried them over on the farm where the cattle were. This owner said, "Now, Doctor, I know my cows have not been infected in any way; I know these hogs were out in the orchard there but we have not been feeding them and they were in pretty good condition; I know my cows are all right." We permitted him to keep his herd under quarantine. (That was the first case in my experience where we left any animals alive on a farm where we knew the disease to exist. When the inspectors go on a farm they kill everything in the shape of a cloven-footed animal.) Two weeks after we were called back there and

eight or ten of the cows had foot and mouth disease. In our first visit we had been just as careful as we possibly could. One does not realize how contagious this disease is and the precaution necessary when going to a place where the infection exists.

## DISCUSSION

MEMBER: I suppose you disinfect the suits?

DR. CLARIS: Every time. After making an inspection we put them in bichloride solution — every part of them. After washing we fumigate them with gas.

MEMBER: This temperature (referring to the extremely cold weather) would kill the infection, would it not?

DR. CLARIS: I do not believe cold would kill it. In the colder weather the animals are not moving around so much, as they are housed. The elements of the air and sunlight have a tendency to kill the virus in a very short time. In a damp place it may lay dormant for at least six months.

I want to say something about the cause of these last two outbreaks: The outbreak of six years ago, though not exactly like the present one, was something on the same order and was brought over here from Japan in *Pox Lymph* virus that was contaminated with foot and mouth disease organism; this was thoroughly investigated by the Federal government.

A number of calves in Michigan were inoculated with this lymph. These calves were afterwards taken to a farm a short distance from Detroit and the disease spread from there. The first shipment of these infected calves was to Buffalo. However, Buffalo did not have as extensive an outbreak six years ago as it did this time.

Six years ago we had infection in Michigan, New York, Pennsylvania and Maryland. I remember that time how hard it was to locate. You know all stock yards have a system by which they can tell where every animal comes from; for instance, they can trace the cattle back to the farm from which they were shipped. We traced it to Detroit, then back into Canada and then into Indiana and Illinois — traced carload after carload, and it was some time before it was discovered that this lot of calves that I speak of had been inoculated with this *Pox Lymph*.

In the present outbreak, it was supposed to come from China or Argentine, either in hides or in sacks in which tanning material was imported. These sacks are very thick. I was informed by Dr. Houck, who has charge of this work in Michigan and Indiana, that the only way he can figure it out is that some of the employees took these sacks home and used them as door mats to wipe their feet on and then went out on the highways, and in that way the cattle were contaminated.

When this trouble first started some people said the state officials in Michigan should have found it out before; but it is a very hard thing to find when it is in a mild form, as I think was the case up there. The germ was weak and it remained dormant, so it was necessary for it to get into two or three herds before it developed into the virulent form in which we have seen it here in New York State.

I think that every state should take it upon itself to have every veterinarian in that state see a case of foot and mouth disease, if it could be done, because the average veterinarian, not only in this state but in other states, has never seen a case.

MEMBER: How long since that first case was discovered?

DR. CLARIS: I think along in August, this year.

Many people believe that these cattle spread it in Michigan and Indiana and then to the Chicago stock yards; thus causing so much trouble in the United States. It is also thought that some hog cholera serum was contaminated with foot and mouth virus, as a number of hogs became infected after being inoculated with serum; this caused more trouble.

In the majority of cases foot and mouth disease terminates favorably—it will only run a course of perhaps five to ten days—and, as a rule, the animal will get better, but will be left in a very emaciated condition. If it would only stop there, it would not be so bad, but they are liable to have two, three or four different attacks, four or five months apart. It is claimed that in the old country, in one instance, a bull had it for two and one-half years. That seems a long time to me, but at the same time it is food for thought.

As to the period of incubation, the books tell us that the period

of incubation is from three to thirty days. Our experience in this outbreak is that it is from three to forty days after the animal has been exposed. That keeps a person waiting anxiously for a long period.

They claim in the old country that it is fatal to human beings. I knew of one case six years ago in Niagara county where a poor family had three cows and three times as many children. We found all these cows had foot and mouth disease and all the children had sore mouths the same as the cows. The children were sick for a few days but all got better.

I remember the first case we had in this outbreak: I received a wire from Commissioner Huson at Albany, saying, "Go to Seneca Falls immediately." For several weeks we had been on the anxious seat, as we knew they had it in Michigan for a month before we had it here. I took the 3:15 train and got to Seneca Falls that night. In the meantime Dr. Wills, chief veterinarian, telegraphed me to meet him at Seneca Falls. The next morning Dr. Wills, Dr. Clark (local veterinarian and the first man to diagnose it in this state), Dr. Wende, federal inspector, and myself, started out. Between Seneca Falls and Clyde we saw the first case in a herd of good average dairy cows. They got two cows two days before that showed the old lesions of foot and mouth disease. We went from there to see two other herds and found they both had it in an acute form. These were also good average herds.

Three days after that the Federal inspector, and myself went back there to appraise those cows; he for the Federal government and I for the state. If we had not seen these cattle three days before we would not have believed they were the same cows. They had each depreciated 200 or 300 pounds.

They have this disease in some countries in Europe all the time, and in other countries part of the time. We have never tried the quarantine methods in this country, but I understand that in Germany they were quarantined for twelve years. In that twelve years the reports show that the government spent \$30,000,000, and they figure that the owners lost \$100,000,000, and they still have the disease.

It does not look as though quarantine alone will prevent foot

and mouth disease. In Great Britain they do not allow any animals to be imported from the Continent unless they go through a siege of quarantine. In Australia they have never had the disease.

I think we have had six outbreaks in this country. The first one was in 1870, one in 1880, one in 1884, one in 1902, one in 1908 and then the present outbreak. I remember in the outbreak of 1902, foot and mouth disease developed in Massachusetts, Vermont, New Hampshire and I think Rhode Island. I know that some of the stock yards there hid the animals and kept them away and three or four months later over one-half of them told about it. This was especially true of their milch cows. The decrease in milk was more than fifty per cent. It took five months to stamp out the disease in 1902 and seven months in 1908. It looks to me as though the slaughtering method is the best.

As I said before, the present outbreak started in Niles, Michigan. The Federal government acted first on Oct. 10; on Nov. 7. in less than thirty days, they had put 240 herds under ground. They certainly must have had a virulent type of the disease in Michigan and Indiana. It is not so bad here in New York State, but it covers so much territory. We have it in the extreme western county and also in the extreme eastern county. I do not think up to date that we have had more than sixty infected herds. Up here we have been more fortunate as New York has been pretty clear of it as compared with many of the other states.

I left Dr. Wende, the federal inspector, yesterday, and he says that the report states that the disease exists in eighteen states. This is by far the most extensive outbreak we have had in America.

I will say just a few words on the quarantine methods. It seems hard at times. Take, for instance, the Federal government: just as soon as we found a couple of herds of infected cattle in Seneca county, the Federal government quarantined the whole of New York State, and we will be quarantined for some time to come.

A gentleman said to me to-day, "Why did not the Commissioner quarantine this state for thirty days instead of ten days?" He knows a little bit of the trouble he had for the ten days it did

last — for it seems there are more things to be done in those ten days than the ten days before.

I do not think it is right; I do not think it is business to quarantine the whole state of New York because we have a few cases of foot and mouth disease; but I do think those counties and towns that are quarantined should live rigidly up to the quarantine.

In the case of Penfield this is shown. When I reached Seneca Falls that night I reported to the Commissioner at Albany. He asked if it was necessary to quarantine the whole county and I replied, "No, Commissioner; just the town." He said, "That is good." He did not want this whole county quarantined when we had the disease in only one town. In that one case it was all right, because that is now thirty days or more ago and we have had no outbreak in any other part of the county.

I just want to say a few words as to the expenses and the *modus operandi* of the Federal and state governments. In the last outbreak the federal government paid 70 per cent. and the state 30 per cent. of the cost. In the present outbreak the cost is divided equally between the Federal and state governments. The Federal government and the state each have an appraiser who appraises the animals for about their market value; we do not argue with them, if they are at all fair in the matter — we meet them more than half way. I know in two or three instances, Dr. Wende and myself, after an owner had put his price on a cow, could see right away that he did not know the market value and would say that it was worth \$5 or \$10 more, and allow it. Even then his loss is heavy, as his business is closed for three or four months, since he cannot re-stock within that period of time.

The farmer digs the hole to bury the cattle which are condemned and we allow him \$2 for the man and \$5 a day for his team. We pay all the expenses for the disinfecting. The only thing we do not do is draw the manure out of his barnyard; we insist upon him doing that at his own expense. We have a lot of men who are disinfecting and also a number of men in the killing gang. They disinfect infected places, including manure, and then spread lime over the top and let it stay there until spring.

I have given you a synopsis of our work as near as I can. I have just tried to tell you some experiences I have had in the last six weeks. I regretted very much to have the Commissioner bring me in from the farms — I would rather have stayed there and worked than to come in here and talk before you gentlemen.

I will give you an illustration where the disease originated in the hoofs of cattle. (As I stated before, as a rule the disease appears in the feet of hogs and sheep, while in cattle it is found in the mouth). In Newark we had a herd of 68 steers. The owner said, "I do not think these cattle have foot and mouth disease and I object to your killing them." I replied, "We will not kill your cattle unless we know they have foot and mouth disease and unless you know." We saw old lesions that indicated they had had foot and mouth disease and were over it and had been put in with new stock. Three or four days after, five or six of the herd were lame, the next day eight or ten, and the next day he came to our office in Newark and said, "Dr. Claris, I am sure my cattle have foot and mouth disease because at least fifty of them are lame."

In this herd they did not show it in the mouth — they had this lameness. The next day twenty-five of them showed acute symptoms.

MEMBER: Does it first originate in the feet or in the mouth?

DR. CLARIS: That was the first lot of cattle I had seen where it originated in the feet. If horses contract the disease it is about as it would affect the average man; a few little vesicles around the mouth which do not amount to much. The day before yesterday I was in Erie county and a farmer said to me, "Doctor, it is down there," indicating a certain farm. When we got to the farm, there was an exceptionally large number of sparrows which came down on this man's farm and his cattle were just showing symptoms of foot and mouth disease. I said, "How did you get it?" "Well," he said, "I will tell you, I guess it is these sparrows." I believe he was right; the sparrows carried the infection to his cows.

MEMBER: How does the disease compare with the old-fashioned foulds?

DR. CLARIS: This is acute and contagious while fowls is not.

MEMBER: Are the symptoms the same?

DR. CLARIS: There is much similarity, but there are no vesicles with fowls.

MEMBER: Can you tell us something of the means of infection in the human being? Is it by drinking the milk or by human contact?

DR. CLARIS: In this case I spoke of in Niagara county it was from the milk. If the creameries cannot pasturize the milk or boil it, they simply must not allow the farmer to take it back to the farm, since raw milk carries the infection.

MEMBER: What was the necessity for the embargo on fruit shipments in fruit cars on railroad lines where there were no cases of foot and mouth disease?

DR. CLARIS: The only thing I can say is this, that it takes a few days to get our bearings. It was only a few days until Commissioner Huson took the embargo entirely off such cases.

We have some claims to pay where they destroyed the apples in orchards — we could not allow those apples to be removed.

MEMBER: I refer to cases where there was no disease along the whole line.

DR. CLARIS: That was a general embargo first.

MEMBER: Do I understand you that in a case of foot and mouth disease, the animal is a great sufferer?

DR. CLARIS: In acute cases they must be great sufferers or they would not lose weight so they look like old "canners," as we commonly say.

MR. HUSON: While this is an interesting subject and we would be very glad to give it some additional time, still we have two more addresses on the program, so it will be necessary that we take up the regular program again now. The next address is, "Problems of the Small Breeder," by Mr. Collingwood, Editor of the Rural New-Yorker, and it is with very great pleasure that I now present to you Mr. Collingwood.

## PROBLEMS OF THE SMALL HERD

H. W. COLLINWOOD, EDITOR RURAL NEW-YORKER, NEW YORK CITY

Mr. President and Gentlemen: I do not pretend to be a large or long experienced breeder. Let me confess that one cow, a dozen hens and one well-bred dog cover my original investment in pure blood. Whenever a man goes into expert company and tries to talk about the life study of those experts, he should talk very softly and throw away pretense, otherwise he is sure to contract foot and mouth disease; that is, every time he opens his mouth he is apt to put his foot in it. Tennyson speaks for us who are one-cow men when he says that the one who starts a line of pedigree is as good as the one who stands at the end of it, and perhaps is better for he has the benefit of those who have gone before without being tied up to some of their bad habits.

I shall not be surprised if some of us who are just starting to develop a choice small herd can give you older breeders a few points. We know what we want, and we know why we want it. We are being forced into the business by the argument of circumstances and there are no rules of the game to interfere with our choice.

I am a fruit grower. I live on a hillside where there must be as little plowing or cultivating as possible, and where every square foot must be occupied by a tree. No one can keep a cow or sheep on the same rod of ground upon which he grows a tree. We use but very little manure and we depend on rye, clover, turnips, lime and chemicals to feed our orchard. Two or three cows, work horses, a few hogs and hens give us all the live stock we have found profitable to carry. There are thousands just such farms in our eastern states, and I think — strange as it may seem to you — that these farms are to provide, during the next few years, the best markets you can find for pure-bred stock.

The fruit grower's land is valuable. He cannot afford to feed scrubs or misfits in his garden or orchard. On my hills, for example, the McIntosh apple grows well-nigh to perfection. The soil and the climate are just suited to it. I bought one block of trees which proved to be misfits. When they came into bearing,

the product was a poor, light-colored apple which my customers would hardly take as a gift. We were obliged to root them out, or graft them, as it never pays to feed a scrub or a misfit tree. When it came to selecting buds for the new top we looked about for the most productive tree, on the theory that there ought to be performance in the pedigree. Scattered through the orchard I found, as every fruit grower knows he can find, trees with very superior growth, color and fruit. One could notice them at a glance, and easily prove that they were superior to trees in the same block or row. We were prepared to take buds from these trees, until I found that this superiority was not inherent to the tree. It was due to qualities outside the tree entirely. Our orchard is on a hillside with only three or four feet of soil above the solid rock. I found that these superior trees stood on places where a dip in the rock gave them a deeper soil and a better chance at moisture. While they thus gave better fruit and larger growth than the others, there was nothing in this superiority which could be carried along to another tree through the buds. We found, however, smaller trees where there was a bud variation so that the fruit was naturally larger and finer in spite of a poorer chance for growth. In this case superiority belonged to the tree and not to the soil, and could therefore be carried on, to some extent, through the buds, and that is partly representing what we call pure blood.

For years we raised a big eared dent corn on the strength of its behavior on other farms. Careful figuring showed me that we lost money on every bushel of such corn that we planted. It was too big, it would not do its best on our thin hills and under our system of close planting between rows of trees. On the western prairies, or on a field of rich sod, it would do well, but it robbed our trees, and gave stalks too large to make good fodder. Then I found a small flint corn which for 250 years had been selected and bred for growing on thin, hilly land. It was as well adapted to this kind of soil as the Ayrshire cow is adapted to a thin, dry, hilly pasture. That gave us the foundation fact in our practice of breeding. There must be performance in the pedigree, and adaptability to conditions. This little flint corn with its small ear and fine slender stalk gives us double the returns for a dollar

in labor that the big dent ever could. That flint is pure bred. The tendency to dawdle along through 150 days of growth and try to make a big stalk and a big ear has all been bred out of this flint variety. Both the Indians and the white men selected it for centuries, and it had to get through before the frost came in order to produce its kind. So with this flint we can wait until our rye and vetch grow shoulder high in June, then we can plow this crop under, use a little lime and plant our corn. We get a sure crop in September, and start another cover crop in the fall. That is what I call "performance in the pedigree," which every pure-bred animal or plant must carry in order to present an argument in its behalf.

Like most of the poor men with large families, I keep several dogs, without being able to give a logical reason for doing so. I have one large mongrel. He is both yellow in color and yellow in character, made so by a long line of cur ancestry. There is a touch of bull dog in this dog, but the cowardly type of the cur has taken the grip out of his jaws. Then I have a pure-bred Airedale terrier, small and ugly looking, but with the purest pedigree that a dog could have. These two dogs follow me about over the farm on Sunday afternoon. One day last summer an ugly heifer got me in a fence corner, threw me down and came at me with horn and hoof. I called for the dogs to help, and they did just exactly what their ancestors told them to do. The mongrel hesitated; there was nothing positive in his pedigree. Yellow always was the color of hesitation. The touch of bull dog in that mongrel urged him to help me, but a long line of curs told him the heifer was ten times as big as he was, and that his duty was to look out for his own skin first. Therefore, all he did was to snap and snarl at a safe distance. The little Airedale never faltered or hesitated for an instant. Every ancestor she had, back to the water dogs who fought for their masters — the English miners — long years before, told that little dog that she must not consider herself when her master was in danger. She sprung at the heifer's throat because every ancestor had put performance rather than promise in her pedigree. That meant pure blood, and its superiority has confronted me at every turn.

We found the same thing true in asparagus. A few years ago the rust disease swept through our country and ruined thousands of acres. It wiped out completely several of our popular varieties. They could not stand against it, and no treatment of spraying gave relief. The government undertook to find varieties which would prove immune to this rust disease. They took a piece of ground and dumped and scattered upon it all of the disease germs and diseased stalks they could find. The object was to make the hardest possible test. Then they started seedlings of Reading Giant on this pest hole to try them out. Out of 500,000 seedlings one male plant proved to be immune. Out of another big lot of seedlings, they found one healthy female plant, and from these two a strain of Reading Giant has been bred which certainly has this performance in its pedigree. Our own soil proved too tough and hard for asparagus growing, but I have found that we can produce a very fine root. Then I found that roots grown from seeds which contain the blood of this immune, pure-bred strain are easily worth three times as much as those grown from seeds picked at random from ordinary beds. We could not possibly get away from the fact — at every turn it confronted us — that performance in pure blood had a superior earning capacity. This experience with corn and asparagus has convinced me that if a fruit grower is to keep any animal at all, it should be a pure blood of good performance. The fewer animals such a man has, the better they must be. I think our fruit growers are coming to this same conclusion, and that is why I am sure they will finally prove to be your best customers.

In my efforts to provide profitable winter work on the fruit farm, we have tried keeping poultry. I am sorry to admit that our winter eggs have usually cost us more than they came to until this season. Of course I understand that a dozen men will try at once to show what they have done with hens. I have no argument coming. There is too much cold air on my hills and too little hot air in me to hold my own in an egg talking contest. I found, however, that there is a good profit in producing well-bred pullets, and selling them at five months old. Just as with my asparagus, I can produce the breeders better than I can produce

the eggs. I think we grow blood to better advantage than we produce water.

Then I started in to learn how to produce pullets with performance in their pedigree. I found that a wonderful change has come over the poultry business. A few years ago people bought pullets largely by their comb and tail feathers and their color. The egg laying contests of the past three years have changed all that, and now buyers demand performance in the pedigree just as they do when buying cattle. Last year I picked up ten ordinary hens. Seven of them were very inferior, culled and rejected birds, sent to the New York market to be sold as food. There were three mongrels, four rejected Plymouth Rocks and three good Leghorns. I entered these ten ordinary birds at an egg contest in competition with 800 pure-bred birds. They were carefully fed and trap nested. On the same food and with the same care one hen laid 79 eggs while another was responsible for 190. The first was a mongrel breed. On her shape and so-called utility markings she was the best one in the lot. The other, however, I knew to be bred from good and well-selected stock. Out of 820 hens in that contest about a dozen never laid an egg during the entire year.

Some years ago I started to breed Rhode Island Reds for performance. I bought a pen of show winners, for at that time about all the certified performance that was reported for a hen was the way she appeared at a poultry show. I am entirely sure that those hens averaged less than sixty eggs a year, and the blood of those well-dressed drones practically ruined our flock. They had plumage rather than performance in the pedigree.

Now we have started the other way. I obtained a pen of Reds from the egg laying contest. During the year they laid something over 1,600 eggs, certified and recorded. They ran all the way from 124 to 189 each. When it came to mating them, I had my choice of their own father to breed back on them, a full brother of ten pullets which laid over 1,800 eggs a year, or the son of a hen which laid 246 eggs in 301 consecutive days. I often wonder what a cattle breeder would do in such a case. I took what I thought was a wise chance and chose the son of an extra good hen as I wanted to build up the vitality of that flock to begin with.

In addition to performance we now have a sure blood test for the germ of white diarrhea in breeding hens. My object is to have all breeding stock tested, and reject every one which lays less than 150 eggs and also reject every one which shows by the blood test that it carries the germ of white diarrhea. In this way a flock of fifty well mated breeders will pay a greater profit than 500 ordinary layers, for blood is not only thicker but it is far more valuable than water. I think I may claim that it is only upon farms which are run at a high pressure like fruit or truck farms that such things are really possible.

The problem of the small herd, therefore, is to put performance into pedigree and cast out the drones. The smaller the herd, the greater the share of proceeds that would be stolen by one drone. I think the small breeder has a better chance to do these things than the large one ever can hope for, and he will be brought to do his best effort, by observing the practical value of pure-bred stock.

A dairyman in my neighborhood bought a good bull of a certain breed. All through our county the calves began to show the color of that bull and many of the heifer calves were raised. When they came to milk, it was found that some were very superior while others were but little better than their mothers. Some of these cows were of the same type as the bull and with some of the same blood. We noticed that the superior heifers were always from these cows; other cows were of no special type or were simply scrubs, and the bull could not influence them as he did the others. These half blood heifers when bred to another bull of the same breeding have produced heifers showing a remarkable improvement and our people have come to realize a foundation principle of mating our cattle; that is, breeding as close to a type as possible.

In the county where I live, twenty years ago probably 80 per cent. of all cattle carried the blood of one of the smaller dairy breeds. Now over 60 per cent. show the color and size of the newer breed. This change has been brought about by the success of several high-class bulls in producing superior daughters from our farm stock. I think the best advertisement, good or bad, that a bull or a man can have is the appearance and the behavior of his children. In South Dakota the farmers are organizing colt shows in order to call attention to high-class stallions. They

rightly claim that a bunch of colts just as they come from half a dozen farms will give a better idea of the value of a stallion than the horse himself placed alone on exhibition. At most of these colt shows it is said that the youngsters prove that two or three strong and prepotent stallions will produce nearly all the first class colts, although these strong stallions did not win over the others at an ordinary show. The father certainly betrays himself through his sons and daughters. I have a cynical friend who says that no man should ever be permitted to hold office unless he has proved his ability to control and train his own children properly. This is probably based upon the scripture, for in the first epistle to Timothy, we are told: "For if a man cannot rule his own household, how shall he rule the church?" I presume this considers the old saying about ministers' sons and deacons' daughters. Seriously, however, I have long wondered why, at our fairs and exhibitions, breeders do not present this offspring argument with greater force. In my own case, when I go to a fair or exhibition and I see a fine cow or horse or sheep, I can appreciate its possibilities, but it seems as far out of my reach as a great poem, a picture or a great piece of music. If, however, I can see that fine bull with one or more ordinary cows and their calves showing definite improvement, I am interested at once because that shows what I can do with my own cattle. I think, if we want to bring home a live stock argument to the working farmer, we should use language that he can understand. His dairy talking is done in terms of the grade cow. The grade is his business cow and I think will remain so until we first show him that pure blood adds to the performance of that cow. We must show him that so that he understands it before he can be expected to see the full value of the pure blood. For example, with the ten scrub hens I have just mentioned, I shall this year breed them to two different cockerels. One is an imported Leghorn with a certified record of five or six female ancestors clear in his pedigree. The other is a common dunghill. I shall enter ten pullets from each cross at next year's contest, absolutely confident that the value of this drop of pure blood will show in the most convincing way.

I look to see in the near future a readjustment of the dairy business, particularly on the Atlantic coast. It will be most

noticeable on our smaller fruit and truck farms and near the large cities. Many of our present dairy farms are going out of business. In Massachusetts alone nearly four thousand of such farms have disappeared in the last few years. These vanishing farms were small places on which herds of ten to twelve cows were kept, largely to make winter work and provide manure. The cows were bought from drovers or in the Brighton market, and there was as much of a gamble in buying each cow as there was in picking out my hens. The result was that with strict inspection laws this kind of cow could not be made to pay, although a better cow would have done so. Rather than spend money to fit up the barns so as to stand inspection, the farmers let these inferior cows go without buying better ones (result of over cropping, etc.).

In parts of New York State, the failure of the milk check to show much of a balance over the feed bill is driving many a farm out of the business. Will not these dairy farms come back? I doubt it. My estimate is that most of them are owned by men of middle age or older who can not now change their methods. Their boys have mostly left the farm, and the average man of middle years can see the future hopefully only through the faith of his children. This disappearance of these dairy farms is like the way that hundreds of farmers that I know in New England were driven out of profitable potato growing. Year after year they selected for seed the small potatoes which they could not sell. Year by year the crop grew smaller and poorer until finally the time came when even these old timers knew that it did not pay. They were driven out of their business by the competition of what we call pure blood, for this comes up in these times as one of the sure things responsible for either the success or the failure of a farming section. Those who started in the business either bought seed from a new locality or else selected in such way that their seed meant what we call pure blood.

In like manner hundreds of farms now supplying milk will finally reach the end of their rope, and pass out. Who and what are to take their places? In my own county it is the small choice herd of fine cattle on prosperous fruit and truck farms. Such farms can afford sanitary barn equipment, and this will be essential in the production of market milk. There are always wastes

to be fed live stock on such farms, and there is a need of manure from the very nature of their farming. Such growers know the necessity of pure and improved blood in plant and tree and animal.

Then again, these farms are close to the markets where sanitary dairy products and meat are always salable. My own farm is within twenty-five miles of New York. Ten years ago you could easily prove by every argument that dairying as a business would never pay there. At this time, however, small herds of good animals are appearing on our farms. Our plan is to start with one or two of the finest animals we can afford and build up a small choice herd on just about the principle I have outlined in connection with my hens. A dozen of us, each with one or two of these fine cows, can club together and raise money enough to buy a high class bull — far better than any one of us could afford to buy alone, and better than most dairymen could ever think of using. Such a community can cull out the drones and test the cattle better than a community of large dairymen, and the very fact that we are working on high-priced land and with limited room would forbid our keeping drones or failures.

My belief is that this plan of community breeding in localities where high class farming is conducted is sure to spread. These small and choice herds will in time send out their share of high producing cattle. They have got to, or the business will be abandoned on the same principle that our farmers will abandon a peach or an apple if it fails to be superior in fruiting. There is nothing in sight today to indicate cheaper grain or fodder in the future. I think there are thousands of cows now on the Atlantic slope that are being fed at a loss. They will melt away and disappear rapidly in the next few years, and in the new adjustment, the production of a finer class of milk is surely going to the small choice herds, which I have mentioned. That is why I feel so confident that a new demand for your best blood and your best stock is coming from a class of farmers who have not heretofore been considered.

MR. HUSON: I should like to devote a few minutes' time to a discussion of Mr. Collingwood's very excellent address, but Mr. Wing will have to leave on the train about 5:20, so we cannot give

any time to it at this time. I now have the pleasure of presenting to you a name that is very familiar to all of us, and whom you will like to hear — Mr. Joseph Wing, of Mechanicsburg, Ohio.

### **SHEEP FARMING IN NEW YORK**

**JOSEPH E. WING, MECHANICSBURG, OHIO**

Gentlemen: I am glad to be here. I do not know that you are aware of it, but I am a New Yorker myself — born down in the hills of old Cattaraugus county. I am always glad to come back to New York — there is something or other about New York people that makes them seem to me like old friends.

In the sixties, when I was a boy, in my part of Ohio there were great factories where sheep were boiled for their tallow, and only the hides and tallow were considered worth saving. In those days men not only did not eat mutton, but considered it an insult to be offered such meat. Then there were great flocks of wool bearing sheep and comparatively few of mutton type. There were smaller cities than now and fewer.

Times changed. The production of mutton declined from various causes, the tariff among them, and the price of wool governed. Cities multiplied and grew and gradually we became a mutton eating people, at least to a considerable extent. Nevertheless in 1893 sheep were sold for 75 cents a head in Ohio, but from that time on there has been a steady raise in prices for mutton.

Since 1891 we have on Woodland farm been producers of fat lambs. Prices have not gone up in steady ascending scale, but in the main they have been raising prices. We have sold as low as 5 cents per pound, but we have sold for 8 cents too, and this year with fifteen hundred fat lambs in the barn, we confidently expect to receive the equivalent of 10 cents a pound. The reason is that the supply of mutton is not equal to the demand, nor can it ever again be equal from the ordinary western sources.

Let us see what has happened to the West. When I was a cow-boy in the eighties, the hills and the mesas of the range country were yellow with bunch grass like wheat stubble. Cattle, hogs and sheep were fat all winter. Then came the time of overstocking. Sheep herds followed one after the other in winter. The first

one ate the grass as low as it could be bitten; the next one pawed away the earth and bit a little closer; the last herd pawed off the earth and dug out the bunch grass by the roots. Then it was dead, and never within the life of the present day of mankind will it ever come back. Ranges in the West, as a rule, have greatly lost their carrying capacity.

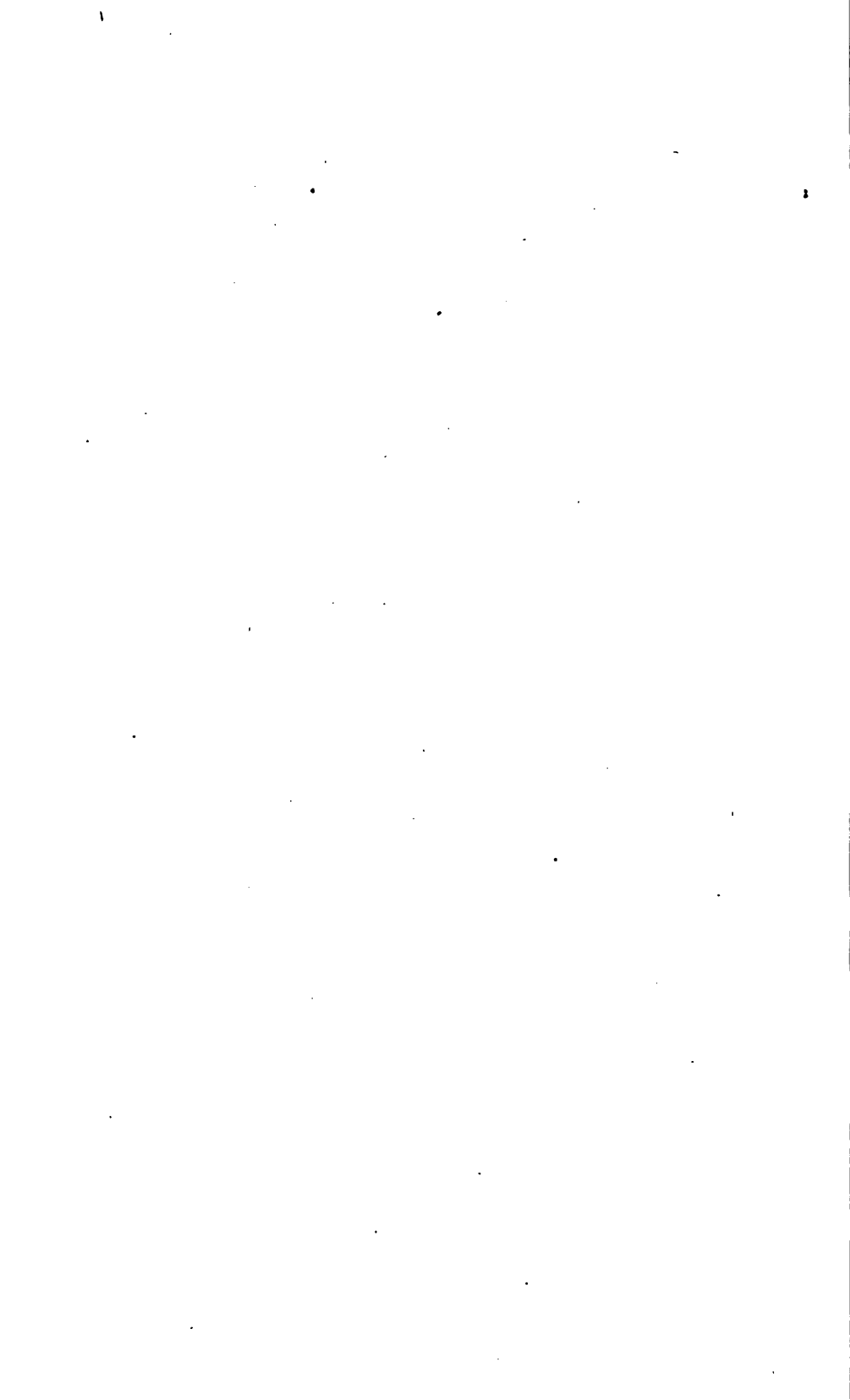
There is another reason, namely, the "dry lander," the farmer who comes tempting fate with his team and plow, his wife and many children, and plows under the range in the land of little rain. Sometimes he gets a crop — just often enough to keep him there. He lives, ordinarily, in poverty, with great hope and expectation and little realization, with many children and much unrewarded toil. Doubtless the "dry land" farmer is a mistake, but under our land laws, he could not be avoided and his coming has greatly decreased the probable use of western ranges both for cattle and sheep. Sheep in the West must decrease in numbers. When the land comes under cultivation and is sown to alfalfa, they do not find profitable place. Sheep do not thrive on alfalfa pasture. Even in Argentina where alfalfa pasture is utilized very greatly for cattle feed, sheep are not a factor, because they have learned that the sheep injure the alfalfa and that the alfalfa in turn destroys the breeding powers of the sheep, making them barren, because of their too great fatness.

What about the Corn Belt, then, and all the great stretch of country from the land of short grass to the borders of New York? Therein sheep might be increased, but the fact is they are not coming in, the principal reason being that high prices for corn cause short-sighted men to plow up their pastures. Sheep stocks of Illinois decrease. In most of the western states they are also decreasing in spite of the better prices secured for fat lambs and mutton and the fairly satisfactory prices for wool.

Well, why will we not secure abundant supplies from South America, New Zealand, and Australia? The reason is easily found. These countries send their mutton to the highest market. They will not send it to America if Europe needs it worse and will pay more for it. In Europe also one finds in many parts a steady diminishing in numbers of sheep. In Germany they decrease because dairy cows and pigs come in, as is made necessary



**FIG. 334.—JOSEPH E. WING**



by the rapid growth of populations in towns and cities. In France the sheep population is more or less stationary as it is in England, but in England the eaters increase and the demand for meat. Only when prices are higher in America than abroad will mutton come to us, and even then we will always find American home killed meats selling for higher price than the foreign article. Good though the latter may be, it lacks the flavor of the American meat, and must be eaten promptly after being taken out of the refrigerator.

New York, it seems to me, has greater possibilities in keeping sheep than making mutton. As to its adaptability to such a use, one need ask for no other demonstration than what he sees coming from such farms as Mr. Duncan's of Niagara, "Hearts Delight," Chazy, or Mr. Wardwell's of Springfield Center. Each farm produces a different type of sheep, and each one has as perfect specimens as can be found in the world. There are no better sheep keeping regions than New York, rightly understood and rightly used.

Doubtless some of the New York farms are too small for profitable keeping of many sheep. Doubtless before New York farming meets its utmost efficiency, some of these farms must be grouped and thrown together, and this will come I am sure. I see no reason why hill pastures of wide extent such as one sees in Scotland may not in New York be utilized for keeping ewes. Their lambs, born early and pushed forward with a little grain and a touch of bran until grass gets strong, will go out with their mothers to these pastures. Doubtless on the best managed farms they will be fed something in creeps in some convenient corner of the pasture. A little grain mixed with mother's milk will stick to the ribs. Lambs thus fed ripen rapidly and in July and August can go to the market. I predict that they will bring 8 to 10 cents per pound, and taking in account the labor, cost of dairying and the present prices for milk, I believe that the sheep farm of proper size and efficient management will show profits fully as great. The labor cost of caring for sheep is very low.

On Woodland farm two men feed and care for fifteen hundred, and have much time for other occupation, and they can care for

two thousand as well. It is our intention to increase our stock to that size merely to keep our men busy.

There has been much talk about why boys leave the farm. Doubtless one reason is that they become so weary of being "tied to the old cow's tail." Boys do not willingly leave sheep farms. There is an interest in caring for sheep. The love grows for the animals under your care, and this interest is never ending as one is, year by year, introducing new blood and developing animals of new and higher types.

A word about breeds. Many breeds seem to thrive in New York State. It has been the home of notable Merinos. I rejoice that there are still some flocks of Merinos in the state, but make this suggestion. The greatest profit from breeding Merinos in New York will come from breeding that type that has the most mutton and the least oil in the wool. It is a curious fact that the more oil one breeds into the wool of the sheep, the less able are they to fatten, and the poorer is their mutton. There is where American Merino breeders made a most serious blunder in days gone by, thinking only of the weight of fleeces and not of the mutton characteristics nor of the scouring capacity of the wool. They bred for about as much oil as they could get. Always I observe the Merino that fattens best is the one with only a moderate amount of oil in its fleece, with a body comparatively free from wrinkles, and in fact, approaching in type that of the English breeds. There is, however, a distinct value in the Merino blood. It is its hardiness, its ability to resist internal parasites and its comparatively small food requirements. A flock of Merino ewes bred to a good mutton sire of any of the Downs or Dorsets will produce exceedingly fine lambs at good profit.

In restocking New York's pastures, it is inevitable that sheep must come from the West since there is no other source from which they can come. Western range flocks are largely of Merino blood, and New York breeders may take them without fear, for they have good capacity for producing fine lambs, when properly fed and mated with proper sires. Of the breeds in use, it is very evident that the Shropshire is adapted to New York pastures, since nowhere in the world has it done better than here.

The Southdown too (a small sheep that weighs as much), does beautifully here, and brings good profit.

The Cheviot is stronger in New York than anywhere and evidently finds congenial pastures, and the Dorset — big, genial, milky stock that it is — comes stronger and stronger and nowhere in the world has given better results.

There is another breed that I should like to see introduced and hope some day to see. That is the Romney, native of pastures of Kent in England. The Romney is a white faced breed with moderately long wool. It is intensely hardy against cold and wet; a fine feeder too, and a producer of very strong and active lambs.

When the New Zealand farmers despaired because their lamb crops were so poor, they turned to the Romney and found success, so that now more than half the sheep of New Zealand are of this type.

Some day we will see the Romney in considerable use in America, and this year would have seen large importations had not the unhappy war come to disturb shipping.

A word about the management. In my book of sheep farming you will find a heading somewhat like this: "Diseases of sheep." Sheep have no diseases. They become parasitic instead. This is as true as I can make it. Sheep do not have tuberculosis nor cholera, nor any disease worth note, except those caused by internal parasites, of which the stomach worm and the nodular diseases are worst. Knowledge of how to avoid internal parasites constitutes about all that is required to bring success in the keeping of sheep.

On Woodland farm, where in the nineties we were devoured by stomach worms, we have now no evidence of any at all. We then gave them medicine and were experts in describing kinds, doses and amounts. Now we give no medicines at all and our sheep have skins as pink as cherries. The reason? Change of pastures.

Frequent change, putting the sheep in this field for a few days, in that pasture for a week, over in the hill field for ten days, back in the meadow for a week, and so on, round and about, bringing them occasionally back to where they have been — that alone with us keeps the sheep in perfect health, and successful pasturing of sheep in large numbers in New York will, I believe, depend upon

the division of the pastures by fences, so that the flock all together may be turned from one division to another as seems best, letting them be for a week in an enclosure and then letting them go to clean grass elsewhere.

Here is a secret I will give you. An ounce of grass in the stomach of a sheep uncontaminated with parasites will make as much fat as a pound of grass in the infected animal. If your sheep are healthy, you simply cannot prevent their getting fat if given access to grass. If they are not healthy, it will take grass and grain and goodness knows what else to make them fat, and there will be neither profit nor pleasure in them.

Naturally to keep sheep with profit one must avoid undue expense. The cost of winter feeding is the large element of expense. There come in three new things to help. One is the silo, and I may say that when the silo is filled with good sound sweet ensilage and is fed in moderate amounts daily — never in large quantity — and with it sufficient good sound sweet hay, roots and perhaps a touch of grain, sheep will come through in fine strong condition.

The next new thing is alfalfa, which assuredly may be grown on almost every farm in New York. The growing of alfalfa is only a matter of good drainage, sufficient lime and fertilization with inoculation of the right bacteria; then there is not a doubt that any farm in New York can grow it, and it is largely a question of the cost of limestone. The alfalfa crop fits in with sheep farming better than any other because sheep may be wintered on alfalfa practically without grain, and from an alfalfa field can be taken more substance than from any other.

The next crop that I should like to mention is sweet clover, for a century looked upon in New York as a weed. We are learning in Ohio that sweet clover makes a most desirable sheep pasture; that sheep love it, get very fat on it and yet will keep in such strong vigor and health that they lamb very strong perfect lambs.

Sheep and other animals bloat on alfalfa. They do not appear to do so on sweet clover. It may be cut even for hay, if cut soon enough, and will be relished in winter and eaten, almost every bit. The beauty of sweet clover is that it will grow on the poorest soils of New York. Only give it limestone and inoculation, with preferably a touch of phosphorus as well, and where sweet clover

grows, blue grass will come in, because the clover so fills the land with nitrogen that grasses come by nature. This that I tell you is not from theory, but from experience upon our farm and from observation on the farms of others. I believe sweet clover for the poor and often eroded hillsides of New York has greater possibilities of usefulness than any other plant that can be named, but very likely it would not grow unless the land was first sufficiently limed, as it is a lime-loving plant. Our own sheep on sweet clover pasture seem to prefer it to all the other clovers, and alternating between the sweet clover and the blue grass, they keep surprisingly fat and fine and have gone into winter in perfect health and condition; some of them in fact in show order, though never having had a bite of grain.

In 1865 my father, living in the poor hills of Cattaraugus county, sold his farm and, taking his little family, went to Ohio and settled on what is now the Woodland farm. In 1866 my memory of this farm begins—I was a boy of five. It was then a notably poor place. It had been rented for a long term of years and the fertility was reduced to its lowest ebb. Resolutely father took up the work of restoration and his first work was to purchase a flock of sheep, which he fed with the corn and hay he had grown. Their manure he prized as if it were gold and put it out upon the land. This was the foundation of Woodland Farm land. Little by little the farm's fertility increased.

I was father's partner when I became a young man, but in the eighties I left him for a time and became a cowboy in the West. After four years of life there I came home once more to take up duties on this farm, to help my father, because he was old and unfit for the management of the place.

In the year 1889, the last year of his management of the place alone, he sold from the farm approximately \$800 worth of stuff. He became greatly discouraged and perplexed. He did not see how he could continue to support his little family on the farm. The next year we sowed our first alfalfa. In 1891 we began again to keep sheep upon the farm, putting on a flock of breeding ewes and also a flock of lambs to be fed during the winter. When spring came in 1892, careful calculation showed that the two hundred lambs had paid for their feed and made us a clear profit of \$115.

The little flock of breeding ewes had done better than that, but I have forgotten the record. We saw daylight then, my brother and I, and determined to devote Woodland Farm to sheep.

The next year we fed perhaps three hundred lambs, saved the manure with great care and put it out on the land, and then we fed three hundred and fifty. Encouraged, we doubled our barn room and fed seven hundred. It was our dream to increase the flock to a thousand. This we did, too, and yet the capacity of the farm was not reached. We fed twelve hundred finally, and fifteen hundred, and to-day on the farm are fifteen hundred lambs, as usual eating their corn and alfalfa. There is a flock of pure-bred Dorsets, as usual, with their fine babies eating alfalfa and oats, and there are about twenty-four horses, Percherons chiefly, mares and colts, all being fed from the produce of Woodland Farm.

How came about this marvelous increase in fertility and productiveness? One might say it came about on account of alfalfa growing, unless he added that it came from feeding sheep, putting the manure back on the land, and thus steadily adding to its fertility. We prize the sheep manure as though it were gold and get it out on the once half barren hills as fast as it is made in winter time.

There has been one good year on Woodland Farm, when the gross sales from the farm were very nearly \$8,000. True, the farm is a little larger to-day than it was once. It has now three hundred and forty acres, part of it a new purchase and hilly and poor. There it is that we grow the sweet clover and pasture the sheep in summer, but we do not believe that the capacity of the farm has nearly been reached.

One element of fertility chiefly we buy. That is phosphorus. We find that even where we use manure, more phosphorus pays, and so we put on basic slag or acid phosphate, or sometimes the raw rock phosphate. Always with the readily available forms of phosphorus we have found quick profits.

Gentlemen, it has been a sincere pleasure to meet you here and talk with you. I see before me many shepherds of note and many who know more about sheep than I do. I do not come as a teacher so much as a student. I come merely to give you an instance of what sheep are doing a little west of you, and to possibly inspire

you with a little hope and courage to put more sheep on New York farms, because assuredly the day has come when clamoring people must be fed and when they are willing and able to pay the prices; when there is really profit in agriculture and outlook and inspiration. Certainly of all the states in America, none can with greater ease of success or profit increase its stocks of sheep than can this great Empire State, my mother state, New York.

MR. DANA: Brother Dairymen, that speech sunk into the hearts of New York farmers, and will solve the milk problem. There are thousands of acres of land in New York State that need the training of Woodland Farm. When I went through a western farm land the other day and they showed me two carloads of lambs feeding there, I thought if there were the same on every farm in New York State we could tell the New York Milk Committee, "Go to it, get your milk; we can live without it!"

Meeting adjourned.

## **BANQUET, WEDNESDAY EVENING**

At 7 P. M. the members of the two associations and their friends assembled in the banquet hall of the Hotel Seneca. President Calvin J. Huson, of the State Breeders' Association, acted as toastmaster. The speakers of the evening were:

Mr. H. W. Collingwood, editor of The Rural New-Yorker, New York.

Mr. S. B. Richardson, of Lowville, N. Y.

Dr. W. H. Jordan, of the Agricultural Experiment Station, Geneva, N. Y.

Dean H. E. Cook, of St. Lawrence University, Canton, N. Y.

Prof. W. A. Stocking, Jr., of the College of Agriculture, Ithaca, N. Y.

Hon. Charles E. Ogden, of Rochester, N. Y.

Mr. H. C. Elwood, President of the State Dairymen's Association, Buffalo, N. Y.

Rev. Brother Barnabas, of the Lincoln Agricultural School, Lincolndale, N. Y.

Mr. F. S. Welsh, of the Agricultural Department, New York Central and Hudson River Railroad, New York.

An orchestra and cabaret performance, provided by the courtesy of the Rochester Chamber of Commerce, entertained the members.

## FOURTH SESSION

THURSDAY, DECEMBER 17, 9:45 A. M.

### BUSINESS MEETING OF THE STATE BREEDERS' ASSOCIATION

Meeting called to order at 9:45 A. M., President Huson in the chair.

MR. HUSON: The first thing in order, I suppose, is the report of the Committee on Resolutions. Mr. Richardson, the Chairman of that Committee, is not here, but will be in a minute. May we have the report of the Auditing Committee?

(In the temporary absence of Wing R. Smith, Treasurer, the report was read by Albert E. Brown, Secretary.)

### REPORT

SYRACUSE, N. Y., December 1, 1914.

Cash in Trust & Deposit Company, January 1, 1914, as per last report . . . . .	\$348 11
Membership dues for year . . . . .	136 00
Interest on deposit to July 1st . . . . .	5 03
	\$489 14

### *Disbursements*

1914.			
Jan.	29.	Wing R. Smith, postage . . . . .	\$10 00
Feb.	2.	Franklin Press, printing . . . . .	4 50
	5.	Rochester Banquet Committee . . . . .	121 50
March	31.	J. B. Lyon Co., printing . . . . .	2.00
April	7.	Tholens Press, printing . . . . .	4 25
	15.	Bastian Bros., badges . . . . .	26 43
May	6.	Lyman Bros., printing . . . . .	15 25
			\$190 93
Dec.	1.	Cash in Trust & Deposit Co. . . . .	297 21
		Cash on hand . . . . .	1 00
			\$489 14

Approved, December 16, 1914.

(Signed) GEORGE E. PEER,  
HARRY S. GAIL,

*Auditing Committee.*

MR. HUSON: You have heard the report of the Treasurer and of the Auditing Committee. What will you do with it?

(Moved and seconded that the report be accepted. Carried.)

MR. HUSON: While waiting for the Committee on Resolutions we might as well go on with our business, and take up the election of officers. The first thing in order is the election of a president for the coming year. What is your pleasure?

MR. SISSON: Mr. Chairman, without premeditation, but to take up again a continuity of effort on my part that I once exercised a great many years — and with a great deal of pleasure — in renominating Milo H. Olin; and following the same precedent of keeping a good man who is doing good work, I wish to renominate Calvin J. Huson as President of the State Breeders' Association.

(Motion seconded and the secretary directed to cast a ballot. This was done and the secretary declared Mr. Huson elected for the ensuing year.)

MR. HUSON: The next in order is the election of a vice-president. In that connection I think I ought to present a letter which I received some days ago from Mr. Sessions, the present vice-president. It is dated November 12, and reads as follows:

“HON. CALVIN J. HUSON, *President, New York State Breeders' Association, Agricultural Department, Albany, N. Y.*:

“MY DEAR MR. HUSON:

“I understand that the State Breeders' meeting will be held at Rochester in conjunction with the New York State Dairymen's Association meeting December 15 to 18. It will be impossible for me to be present at that time, so I wish to tender my formal resignation as vice-president of the association, and must insist that you elect someone in my place for another year.

“I assure you my interest is and will remain as great in the organization and in agricultural questions as heretofore, and anything I may do at any time to be of assistance to you either in the Breeders' Association or in the Agricultural Department, or elsewhere, you may command me, but to hold office in any of these organizations is something I cannot do

and do not wish to do, so won't you kindly see that my wishes are carried out in this respect.

"Very truly yours,

"(Signed) F. W. SESSIONS."

What is your pleasure in regard to the election of a vice-president?

MR. PEER: Mr. President: I would say, for the purpose of helping you out, that I had a letter from Fred Sessions to the same effect — under no conditions could he accept the position of vice-president. While we would all like to see him nominated, I believe we should do what Mr. Sessions requests. I should like to place in nomination the name of Mr. H. B. Harpending.

MR. HUSON: You have heard the name of Mr. Harpending. Are there any other nominations?

(Moved and seconded that the secretary cast a ballot of the Association for Mr. Harpending for vice-president. Carried. Mr. Harpending was declared elected.)

MR. HUSON: The next in order is the election of a secretary. Whom do you want for your secretary the coming year?

MR. PEER: I have had the pleasure of renominating Mr. Brown every year, and should like to do it this year.

(Moved and seconded that the Chairman cast one ballot for Mr. Brown for secretary. Carried.)

MR. HUSON: The ballot has been cast and Mr. Brown declared elected.

The next is the election of the treasurer. Whom do you wish for your treasurer?

MR. LAWRENCE: Mr. Chairman: I would nominate the present treasurer to succeed himself, and move you that, if there are no other nominations, the secretary cast one ballot.

MR. HUSON: It is moved and seconded that Wing R. Smith be elected treasurer for the ensuing year, and that the secretary be authorized to cast the vote of the association for him. (Motion carried.)

The next is the election of five directors in the place of Prof. H. H. Wing, Dr. C. D. Smead, Harry B. Winters, George A. Smith and H. B. Harpending. How do you wish to elect them, singly or in a group, or what is your pleasure?

(Moved and seconded that they be elected singly. Carried.)

MR. PEER: In that case I should propose that Prof. H. H. Wing be renominated to succeed himself.

MR. BELL: Before we proceed further: if I recollect rightly the officers must be elected by ballot.

MR. HUSON: I think you are right about that. Mr. Peer moves that the secretary be authorized to cast a ballot for Professor Wing. (Carried.) The ballot has been cast and we declare Professor Wing so elected.

Mr. Harry S. Gail is nominated for director to succeed Dr. C. D. Smead. Are there any other nominations?

MR. SISSON: I move that the secretary be authorized to cast the vote of the association for Mr. Harry S. Gail for director. (Motion carried.)

MR. HUSON: The secretary has cast a ballot and I declare Mr. Gail elected.

The next is the election of a director in the place of Mr. Harry B. Winters. What is your pleasure?

(Motion made and seconded that the secretary be authorized to cast a ballot for Mr. Winters. Carried.)

MR. HUSON: It is moved that the secretary be authorized to cast the vote of the association to that effect. The secretary has cast a ballot and declares Mr. Winters elected.

It is moved and seconded that Mr. George A. Smith be nominated as director to succeed himself, and that the secretary be directed to cast one ballot. (Motion carried.) The secretary has cast the ballot and Mr. Smith is elected.

The next is the election of a director in the place of Mr. Harpending, whose office becomes vacant by reason of his election as vice-president. Whom do you want in the place of Mr. Harpending for his unexpired term?

**MR. LAWRENCE:** I move that Mr. George E. Peer be nominated.

**MR. HUSON:** Are there any other nominations? Mr. Lawrence moves that the secretary be authorized to cast the vote of the association for Mr. Peer as director, to fill the unexpired term of Mr. Harpending. (Motion carried.) The ballot has been cast and Mr. Peer is declared elected.

That completes the election of officers. Mr. Richardson, the Chairman of the Committee on Resolutions, was just here and said they were not quite through, but they could report the resolution as far as completed.

On our program we agreed to give some time this morning to a discussion of horse breeding problems, to be led by Professor Harper, and we will probably have to take the question up here instead of in the other room. We will have the report of the Committee on Resolutions and then we will take up the horse breeding question.

**MR. RICHARDSON:** Mr. Chairman and Gentlemen: Your committee has been laboring assiduously to expel such resolutions as we thought it was unwise to come before this body, and we have tried to get before the body such resolutions as we thought would be wise. In our deliberations there were some things that we thought might possibly be taken up upon the floor, and it is up to you to say whether they shall be or not. What we have I will give you.

#### RESOLUTION NO. 1.

**RESOLVED,** That the thanks of the association be extended to Mayor Edgerton and the Chamber of Commerce for courtesies extended to this association, which have materially added to the pleasure and comforts of the members during this convention.

Mr. Chairman, I move the adoption of this resolution. (Carried.)

#### RESOLUTION NO. 2.

**WHEREAS,** The New York State Breeders' Association recognizes the conservative and intelligent counsel and assistance rendered to the live stock interests of this state by the State Department of Agriculture; therefore,

*Be it Resolved*, That this association endorses and commends the wisdom and efficiency of the present Commissioner, Honorable Calvin J. Huson.

Gentlemen, I move the adoption of this resolution. (Carried.)

RESOLUTION NO. 3.

WHEREAS, The New York State Breeders' Association has been deeply disappointed in having to curtail its plans for the present convention; therefore,

*Be it Resolved*, That we recommend to the new board of officers that a mid-winter fair, exposition and live stock sale be made a feature of next year's meeting, if it is found to be feasible to do so.

Mr. Chairman, I move the adoption of this resolution. (Carried.)

RESOLUTION NO. 4.

WHEREAS, The present law relative to bovine tuberculosis does not seem to be effective in eradicating this dreaded disease from the bovine herds of this state; therefore,

*Be it Resolved*, That this Association urge upon the legislature the vital importance of an amended law looking toward the elimination of all animals whose milk is unfit for human food and which are a menace to the herds.

Mr. Chairman, we spent a great deal of time on this resolution, and we tried to get it in shape so that the committee which has been appointed to look up this matter will put us in a proper light before the people of the state, and before the Legislative Committee, and I move the adoption of this resolution. (Carried.)

RESOLUTION NO. 5.

WHEREAS, Our present statutes are inadequate for the protection of the quality of many thousands of colts bred in this state each year; therefore,

*Be it Resolved*, That it is the sense of the New York State Breeders' Association that a suitable bill be prepared and introduced in the present legislature to improve the stallion service, to the end that scrub, mongrel and unsound sires may be eliminated.

Mr. Chairman, I move the adoption of this resolution. (Carried.)

The following resolution was handed to me by a representative of the railroad companies, and I have called the attention of many members of this association to its provisions, and we decided that it should come before you and, in our opinion, should be adopted:

WHEREAS, The prosperity of the dairy and livestock interests of the state is, to a large extent, dependent upon satisfactory service and adequate transportation facilities being furnished by the railroads of the state; and

WHEREAS, Enforced expenditures for the employment of more labor than is necessary in the operation of trains not only seriously prevents railroads from furnishing such service and facilities, but also renders the farmers' competition for labor more severe; therefore,

*Be it Resolved*, That this association request the legislature of New York to so amend the present so-called "Full Crew" law of the state as to give the Public Service Commission of New York State full authority to decide all questions arising as to the number of men that shall be required for the safe and efficient operation of railroad trains within the state.

Mr. Chairman, I move the adoption of this resolution. (Carried.)

All of which is respectfully submitted by your Committee.

Mr. Chairman, I omitted to read one resolution that has just been handed to me.

"In taking from us our respected and beloved brother, E. H. Dollar, we feel acutely the loss of his genial companionship and his wise counsel.

"His success in his chosen field, while phenomenal, was due to his wonderful foresight and undaunted courage, and brought to him his just pecuniary reward and honor.

"We wish to show our appreciation of his worth by ordering that this memorial shall be entered on the minutes of this association, and that an engrossed copy thereof be sent to the bereaved family, to whom we extend our profound and sincere sympathy in their great affliction."

It gives me great pleasure, Mr. Chairman, to recommend the hearty adoption of this resolution by a rising vote of this association. (Carried unanimously.)

MR. WING R. SMITH: I should suggest that this resolution be sent over to the Dairymen's Association so that they may adopt it also.

MR. HUSON: We will now give forty minutes to the discussion of horse breeding problems. Professor Harper is here and has promised to lead the discussion. I now take great pleasure in introducing Professor Harper.

### HORSE BREEDING PROBLEMS

PROF. M. W. HARPER, ITHACA, N. Y.

Mr. Commissioner and Fellow Breeders: Frankly, I am always at somewhat of a loss to know what to say when asked to lead a discussion of this sort among men of the experience that you have had. In matters like this, the things that we should do are probably not new; and very much of the new in many lines of human endeavor, as well as horse breeding, is not true. An old expression, only put in a little different words.

So I have come before you this morning not to present any new phases of horse breeding, and without further apology I propose to discuss some of those old things you all know, and which it seems to me, we should try to do. In the first place, New York stands high as a horse-breeding state — a thing that we sometimes seemingly forget. New York stands high in the list in breeding trotters and pacers, probably first in the list in breeding "hackneys," and only a few years ago stood first in breeding "thoroughbreds," and stands high even now. Not only do we lead in the production of light horses, but New York is gaining rapidly in the production of heavy horses. This is particularly true of Percherons. A few years ago we were away down on the list as Percheron breeders, while to-day we stand tenth in the breeding of Percheron horses. We have been making similar progress in the breeding of Belgians. Some particular counties in the state are breeding nearly as many heavy horses as some of the counties

of the western states. Steuben, Allegany, Erie and Lewis are making notable progress in the breeding of draft horses.

Now it is well that we should stand high as horse breeders. New York State is primarily a horse-consuming state. The cities in this state consume one-third more horses than cities of any other state in the Union. There are to-day one-third more horses in the cities of New York State than the next highest state in the Union. I have, from time to time, tried to make a general estimate as to the number of horses New York State was probably consuming, to see what the possibilities were of the state breeders supplying them. Now, of course, all we can do in such an estimate is to guess as we have no figures or statistics on the number of horses used up. There are, in round numbers, 300,000 horses in cities in this state. Those of you who are familiar with city conditions know that, as a rule, a horse does not last over five years in the city business. Horses are usually purchased around four or five years of age, and as you know, the average horse upon the street will not average ten years of age. Thus if the horse is employed only five years in the cities, and if we have 300,000 of them, then we are consuming annually about 60,000 horses in the cities alone.

There are on farms in New York State, about 600,000 head of horses. The average farm horse, I presume, will hardly last more than 12 or 13 years. To be sure, you may know of horses 30 or 40 years old, and a great many of them in the 20's; but the average farm horse will not last long into the teens. Thus if there are 600,000 head on farms, and they last only 12 years or so, then we are consuming from 50,000 to 60,000 horses each year on farms.

If we are consuming 60,000 in the cities and 60,000 in the country, this means that New York State is consuming, annually, about 120,000 head of horses. Now that is a mere guess, but it is the best we can do in the absence of statistics.

New York State is raising only 25,000 horses a year. If we are consuming 120,000 and raise only 25,000, we must import from other states 95,000 head of horses each year.

We do not know what those horses cost per head. I have put an average estimate of \$200 each. That seems to me to be con-

servative, in view of the fact that we know of many of the western horses coming in and selling as high as \$275 each. If we do pay \$200 each, then we are paying a tribute of \$19,000,000 to the West for horses used up in this state. In addition to the horses used in the state, many thousand pass through New York State markets to adjoining states — to the South, to the North and for export. This large consumption of horses as well as those passing through the state, has resulted in the development of some of the largest horse markets in the country. We have one New York firm that handles from 35,000 to 40,000 head of horses each year.

It is interesting, it seems to me, in this connection — if we are thinking of supplying these horses — to know what kind of horse the market demands. We must know and we must supply what is demanded, otherwise the buyer will go where he can get what he wants. I made a study of this a few years ago. Here also accurate information was difficult to obtain. The different salesmen would give different data, but the average of their opinions seemed to be that about 20 per cent. of those 95,000 head of horses ran less than 1,200 pounds in weight, and about 10 per cent. more than 1,500 pounds in weight, leaving, in the rough, 70 per cent., weighing between 1,200 and 1,500 pounds. Now if that is true, there is 80 per cent. of those 95,000 head of horses weighing more than 1,200 pounds, and no doubt containing considerable draft blood.

The most pitiful condition of this entire situation — to me, at any rate — is the fact that our farmers do not breed the horses they consume. Our farmers are not to blame for the horses used up in the cities; they cannot help that. A moment ago we estimated that there were 60,000 head of horses used up on farms and that there were only 25,000 head bred on farms, which means that the farmers of this Commonwealth are buying 35,000 head of horses to use on their own farms; and at \$200 a head, they are paying a tribute to the West of something like \$7,000,000.

Take our county of Tompkins from which I happen to hail at present. Ithaca alone imports four or five carloads of horses from the West, and these carloads will average 16 horses each, or a total of 80 head; and at \$200 a head, there is \$16,000 that Tomp-



FIG. 335.—PROFESSOR M. W. HARPER

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kins alone is paying out. And most of these go to the farmers, because our merchants buy, in the main, from some large market. Is it any wonder that Tompkins county farms have been deserted? You cannot work farms without horses, and that is too heavy a tribute for Tompkins county to pay for horsepower. In all probability other counties are paying equally as heavy a tribute. And from my point of view, having grown up on a large farm, I do not believe that we could have held that farm free from indebtedness if we had attempted to buy the horses that we used on the farm. I do not know about that, but it would have been a heavy tribute if we had attempted to buy those horses.

Someone has said he could buy horses cheaper than he could raise them. When he said he could buy a horse cheaper than he could raise it, I asked him what it cost to raise a horse. He did not know, neither did I, so we made some observations on what a horse would probably cost. Thus to get some figures on the probable cost of raising a horse we conducted some experiments, keeping accurate account of the food consumed up to three years of age, with the following results:

FOOD CONSUMED BY GROWING COLT

AGE	Period	RATION		Total grain	Total hay	Pasture
		Grain	Hay			
Sucker .....	June to October .....	2	.....	300	.....	.....
Weanling .....	November to May .....	5	7	1,050	1,470	.....
Yearling .....	June to October .....	.....	.....	.....	.....	5 months
Yearling .....	November to May .....	7	18	1,470	3,780	.....
Two-year-old .....	June to October .....	.....	.....	.....	.....	5 months
Two-year-old .....	November to May .....	9	20	1,890	4,200	.....
Total .....	.....	.....	.....	4,710	9,450	.....

Grain consisted of 50 parts ground oats, 25 parts wheat bran, and 25 parts corn meal. All colts were fed three times per day and received whole oats in the morning.

4,710 pounds grain — \$20 per ton.....	\$47.10
9,450 pounds hay — \$10 per ton.....	47.25
Cost of food.....	<u>\$94.35</u>

Now there are three methods of estimating the cost of raising a horse. One is to figure the food at the price on the market; one to figure it at the price on the farm; and another method is to figure it at the estimated cost of producing it on the farm. In the estimates above I have figured the grain at \$20 per ton and the hay at \$10 per ton, simply because these figures are easily added to or taken from according to conditions. This gives a food cost of \$94.35. Of course this does not include the pasture, service fee, risk on colt, labor and other inconvenience incident to raising a horse. Without giving details, we estimate that it costs about \$145 to raise a light one, one weighing about 1,000 pounds; \$160 to raise a medium weight horse, one weighing 1,300 pounds; and \$175 to raise a heavy horse, one weighing 1,600 pounds. At the time these experiments were begun the selling price was \$140 for the light, \$200 for the medium, and \$300 for the heavy. To get this clearly before us, the following table is arranged showing the profit or loss in raising the three classes:

	Light.	Medium.	Heavy.
Total cost .....	\$145 00	\$160 00	\$175 00
Selling price .....	140 00	200 00	300 00
Profit or loss .....	\$-5	40 00	125 00

According to this computation, my friend who said he could buy a horse cheaper than he could raise one was right — he can buy a light horse \$5 cheaper than he can raise it. But how about the other class — those which, as we have already suggested, are in demand on our leading markets? Had he attempted to raise such horses, he could have made a profit of from \$40 to \$100 per head, and even more.

## DISCUSSION

MR. SISSON: The point I have been working on is to figure every item of cost — overhead charges and every other item. Now you have given us the cost of the food of that colt up to the age of three years, in the spring. He is not salable. I am embarking on a horse-breeding proposition myself, and I want to be sure of my premises before I get in too deeply. In your total cost you make estimates.

PROF. HARPER: I could do nothing else. You see, our conditions there are abnormal.

MR. SISSON: I do not want to interrupt your train of thought.

We are dairymen, a great many of us. Is there any other item or point in the economy of farming that we can take up with greater profit? Can we make it figure out that it will bring us more money net than we are now getting; that is, the economic feature?

PROF. HARPER: That is the reason I have covered so much ground.

DR. DEVINE: Is it not a fact that if a man wished to run his business very exacting, and if in the winter the heavy colt is about two and one-half years old, he could dispose of an older pair of horses, and the two-year-olds would do the light winter work?

PROF. HARPER: Yes, I should think so.

DR. DEVINE: I know it is so.

PROF. HARPER: Most of us expect to work the young horse, beginning, as you say, at two and one-half years of age. I wanted to give him the advantage of figuring him a dead loss up to three years of age. Now it is difficult to get at these expenses from a farmer's point of view, as I see it. He must keep the horses to do his farm work. I argue that for average farm work, geldings are too expensive for farmers to keep. According to our farm management friends, we only use our horses an average of three or four hours a day throughout the year. Of course, at certain times, we use them hard. Then there are five to seven months that they are eating "their heads off." It seems to me

a gelding is too much of a novelty, and too much of an expense, for a farmer to keep. So my advice to the farmers would be to keep mares and raise colts, and fit them in with the farm work. I should breed these mares so it would not interfere with farm work. Most of our farmers will have their farm work done by the first of October. You probably can have your mares foaling along about then. You would have to give them a little extra care in the winter, to be sure; but that is the idle season, and while that time is worth something, it is difficult to put a price on it. And there is the item of risk, which is hard to get at. Not all foals that come into the world live to maturity.

MEMBER: Is it not a difficult thing to get mares to breed in the fall?

PROF. HARPER: Yes, but my estimates have been low. We estimate that in the long run, only about one-half of the breeding mares conceive, and that is taken more on a fall estimate. You probably could get 60 or 70 per cent. of your mares to conceive if you took them in the spring, at their regular breeding season. In the long run you will only get one living foal for each two mares bred. Of course there are other elements of expense difficult to get at; but I have estimated them to be, in a general way, one-half of the feed cost, which is approximately what it averages on large general farms.

MEMBER: At what age do you breed your mares?

PROF. HARPER: As soon as they will conceive.

MEMBER: Could not the mare raise a colt before she develops enough to go on the market?

PROF. HARPER: There is a great deal of discussion as to whether we should breed a two-year-old filly or not. A well-developed two-year-old filly can be bred without injury to herself or to her foal, but in my experience, only about one two-year-old filly in four will conceive. So you might be ever so willing to breed a mare at two years of age, and that would be all the good it would do you. A little higher percentage of mares will conceive at three years, and a little higher at four, and so on until five, when about 70 to 80 per cent. of them will conceive.

Providing it is well grown, it is all right to breed a two-year-old filly.

MEMBER: Is not that a much higher average than the ordinary farmer can get?

PROF. HARPER: A great deal higher average than the government is getting. I have been told they have 40 to 60 mares on their western farms and are only getting 5 to 6 colts a year.

MR. FRASER: The men in western New York, especially in this tract here, are interested in fruit. On a fruit farm our cost per hour, per horse, is 25 cents; on a mixed farm, it was down to 14 — that was a farm that was one-third fruit and two-thirds general farming. Can I afford to work a brood mare under those conditions on a fruit farm? Can I afford to have her handicap my business? The point is this: you are appealing to a section which is interested in that particular condition — there are five counties here that are particularly interested in just the manner I have described. The town of Genesee will take six carloads of horses every year, because those men feel that the handicap is too great, and when the labor cost is up to a certain point they must have a horse that must go right through. The question comes back, "Can those men, under those conditions, touch horses?"

PROF. HARPER: Of course my experience has been with general purpose farms. I am convinced they can do it there, but they are not fruit farmers. You say you feel you cannot afford to own a brood mare under those conditions.

MR. FRASER: We are getting just one out of nine. In other words, if we got more mares in foal it would just paralyze us. We are raising two or three colts a year. I represent a large factor in western New York — it is the money end of western New York.

QUESTION: I should like to ask this gentlemen if he would be as much handicapped if he raised spring colts?

MR. FRASER: More so; I could not possibly touch a spring colt.

MEMBER: I have eight brood mares that I raise colts from, and these eight brood mares plow over 100 acres and raise the

colts. My mares are pure-bred Percherons, and are the very best kind of work mares.

PROF. HARPER: I should like to know a little more about how a brood mare is handicapped. I am, as I say, now leading a discussion, and I want to develop Mr. Fraser's idea. What handicap do you find in brood mares? Why would you rather have a gelding than a brood mare?

MR. FRASER: Only that I am paying the men a big salary and I have a lot invested, and the work has to be done in a certain time.

PROF. HARPER: Why will not the brood mares do it as well as geldings?

MR. FRASER: The point is that the men want to work the brood mare lighter because she is in foal. They say that the mare can not stand it, and she sweats; that one cannot get the work out of them.

PROF. HARPER: In answer to that I will say: we haul coal — the hardest work imaginable, — through this very season over all sorts of ground with mares that are going to drop colts in January. We have had one abortion in ten years.

MR. BELL: I have bred a great many colts, and I find that the important thing in breeding colts is not always clearly understood. The facilities, the accommodations, the range for the colts to run on, all have to be taken into consideration in order to make it profitable. I have bred no colts for the last few years — very much like Mr. Fraser, my business is largely a fruit business. Another important thing to be taken into consideration in breeding any kind of stock is suitable help. With inexperienced and undesirable help on your breeding farms you cannot make it a success, for the reason that your losses will be more than your profits on your income. Another consideration is whether you are an enthusiast in the business. If you are an enthusiast you will see to it that the conditions that are favorable to the profitable breeding will be at hand; if you are not an enthusiast such conditions will go by default. The profit and loss depend largely

on the surroundings and conditions, and the enthusiasm of the breeder.

PROF. HARPER: Of course you must have the spirit. You must realize that you are raising stock, and give them care accordingly.

MEMBER: I should like to know why the government can raise but eleven colts from sixty mares?

PROF. HARPER: Lack of proper management, in the main.

I have been told that we have just two and one-half more minutes to finish up what we have to say. I am leading a discussion in the interest of New York breeders generally. I cannot answer for the fruit man. If he has not the will, my advice now is, do not do it, as has been so well pointed out. Unless you have the will, unless you are willing to try to make it a part of your business, do not attempt it.

I should like to say that it is not possible for New York State to raise all the horses it consumes. We only have 600,000 horses on farms. Assuming that one-half of these are mares and one-half the mares of breeding age, then only 150,000 of the mares are of breeding age, and only one-half of the mares of breeding age will give birth to living foals — thus producing 75,000 foals. That is the best we can do. So that even if we were determined to put all of our energy to raising the horses consumed in this state, we could not do it. This insures a good market.

New York State pays more today than any other state in the Union for its horses. Let us compare: Iowa has 1,490,000 horses, and raises 159,000. She raises one for each nine horses. New York is only raising one for each twenty-four; so that it seems to me New York could raise three times the number she is now raising and not affect the business. Let us compare Iowa's market with New York's market. There are 300,000 head of horses in cities of this state, worth about \$60,000,000; or, in round numbers, \$200 a head. There are only 123,000 head in Iowa, worth \$14,000,000, or \$118 a head. New York horses are worth \$70 or \$80 more than Iowa horses.

Another interesting thing: horses on farms in New York State are worth \$140 and those in cities \$200, whereas in Iowa the horses in the cities are worth less than those on the farms.

Now I wish to conclude by saying this, that I am confident that over much of New York State the right sort of horse can be raised at a profit. While I cannot answer for the fruit farmer, the market gardener and the like, I do say we will get better foals, and more of them, if our brood mares are worked 300 days a year. If we let our mares remain idle and deny them exercise and work, we will meet with the same condition the United States government did — and a very low percentage will produce living foals. The idle mare is subject to a number of ills which the mare worked regularly escapes. We work our mares up to the night before foaling and then we leave them idle nine days. They are bred on the ninth day and go back to work again. I am in a position to know that this will give better foals than if you lay your mare up two or three weeks after foaling. It is a difficult matter to raise a foal, as the government is finding out, if you do not work your mare both before and after foaling. Were our farmers willing, they could raise three times the horses they are now raising, and save the state some money.

MR. BELL: I notice the report of the treasurer shows there was \$126 reported as received for dues; 126 must pay \$1 apiece. I should like to call the attention of the association to the fact that it seems to me very small. I have made it an object for the last twelve years or more (and I think Mr. Smith will bear me out in this statement) to bring in one or two new members each year. If every member would just think a little, it would be a very easy matter for him, without much labor or time spent, to procure a new member for this society. We need them. I hope when you go home you will take this into serious consideration for the best interest of the society.

MR. WING R. SMITH: One trouble is that the old members do not pay up their dues and the other is that we do not get enough new members. The number was 136, instead of 126. We have less than 60 who have paid their dues at this meeting. You cannot run business that way.

(At this juncture the meeting was declared adjourned by Mr. George A. Smith, acting as chairman.)

## BUSINESS MEETING OF THE STATE DAIRYMEN'S ASSOCIATION

The session was called to order by George Hogue, at 9.15 A. M., as an adjourned session of the cheese discussion.

MR. HOGUE: While waiting for the regular business session to open, we will take up the cheese question, adjourned from yesterday morning's session. I will call upon Mr. Sweetland, of South Dayton, to continue the discussion.

Mr. Hogue read questions of Round Table discussion.

MR. SWEETLAND: We have discussed to some extent the first two questions, and we will take up the third one. "What are the causes of mottled or veiny cheese?" I will call on Mr. Smith, of Geneva, to answer this question.

MR. SMITH: There are many causes. It is not easy to say just exactly what the cause may be in any special case. Sometimes in packing the curd it is not properly protected, for the air gets on it, and it is very difficult to get it right.

Another loss comes from the uneven cutting of the curd; more moisture in one part than in another. All of these things may happen to produce that.

With your permission, I should like to say a few words on this whole subject. We have been working for many years trying to teach men to make cheese out of poor milk, and it is all wrong. The theory is all wrong. What we have to do is to teach the farmer that it is his duty to produce better milk. This condition is one that has grown up. A great many years ago, when I was a boy, and we made cheese in a large dairy, we made good cheese most of the time, and if we did not, we had to find out why. It was up to us to know why it was, and to make good cheese. In the first place, my uncle was a very particular man, and we did what you have heard about, washed off every cow's udder with a damp cloth before we milked, and the cows were milked in a clean shed. Therefore we had clean milk.

When we began to have the neighbor bring in his milk, then our trouble started. The trouble has gone on from that; the man who sells milk to a creamery or a cheese factory dumps the milk into the whey can and there he believes his responsibility ends.

You could not convince him that he has anything to do with the quality of the cheese. We must convince that man that he is primarily responsible. The milkman will get the success that the fruitman has obtained when we do what the fruitman does. If he gets high priced fruit he must take care of his trees. The dairyman must get down to the same thing and on the same plane. He must realize it is up to him to make clean milk. The thing is not to learn how to make good cheese out of poor milk, but how to get good milk.

MR. HOGUE: I think that is very timely indeed. I remember when a man first came to our town to talk good roads. He said there were three essentials in obtaining good roads: the first thing was drainage; the second was drainage, and the third was drainage. It is the same way with cheese. We must have good milk.

MR. JONES: I should like to ask, "While we are waiting for the state men to bring about a condition whereby we will get good milk, what are we going to do?" As you all know there are mornings during hot weather when very little of the milk brought in to some of our cheese factories is in a suitable condition to be made into cheese. What is the cheesemaker to do? He must either reject the whole of that milk, or do the best he can with it.

In connection with one thing brought up yesterday, it is my opinion that so long as conditions are as they are in regard to this matter, through the hot weather, that it is better for the average maker not to use a starter. As Mr. Smith tells us, we want better cheese, and I think there is more poor cheese made with the abuse of the starter than otherwise. When improperly used a starter will propagate bacilli detrimental to the cheese.

MR. SWEETLAND: It seems this discussion covers the next question as well.

MR. HOGUE: I have asked Prof. Cook to come in this morning and say a few words on the pasteurization of whey.

MR. COOK: I said to Mr. Hogue, when he made the request this morning, that there were four men in attendance at this convention who have given me more information on this subject than I have ever been able to get in any other part of the United States.

It is my individual opinion that the whey should be pasteurized — it ought to be made compulsory. Two or three states have already done it, particularly Minnesota. In Minnesota they have a law on their statute books which calls for the pasteurization of whey. All will see that the whey will be worth more after it is pasteurized, and this ought to be done. The point is whether such a regulation would be popular and properly enforced. I should rather not have it, than that it should be on the statute books and not carried out, for it then leads to a lack of confidence in law. It is my opinion from the general sentiment of this convention, that they are going to recommend the passage of such a law. The testimony that these men have given me all points that way. The people who have opposed it said that it meant the elimination of a large number of small factories. We cannot drive these men out of business — that is not fair. The state must not adopt that policy. At the same time these men must not stand in the way of progress, because it is a primary principle, and any fellow who gets in the way of real progress will find he has a German seige gun to deal with. Somewhere there is a platform on which we can stand, and I think the consumer of our products is going to have something to say, and if we do not watch out he is going to execute a flank movement and get us in some vulnerable point, and make it compulsory. Now, Mr. Chairman, is this what you had in mind?

MR. HOGUE: Anything further about tuberculosis being transferred to the offspring?

MR. COOK: Of course tuberculosis bacilli, wherever found in the milk, are very readily transferred through the by-products.

MR. HOGUE: Any other questions?

MR. JORDAN: What is your compromise between law and no law? Is there any middle ground?

MR. COOK: There is not; but I expect we will have to compromise on a point and find some way of winning the fellow who is against it. There could really be no common ground. The law would have to say "pasteurize" or "not pasteurize." I am trying to map out a mutual state of compromise.

MR. HOGUE: Is pasteurization being done to any extent?

MR. COOK: How many here are pasteurizing—hold up your hands? (Four.)

MR. HOGUE: Why?

MR. COOK: Ask them.

MR. JONES: Because I find the value of the policy.

MR. HOGUE: Do the farmers ask it?

MR. JONES: No. This matter was brought up at the State Dairymen's Association at Syracuse, and Mr. Hills said it should be done. I told him it was about what was coming, and we had better get into the procession and get ahead of them. We could not get a man later, however, to say stop pasteurizing.

MR. HOGUE: What do you charge?

MR. JONES: We charge five cents a hundred.

MR. HOGUE: Why did Commissioner Huson recommend it?

MR. COOK: I suppose it was to fight against tuberculosis.

MR. JONES: We pasteurize for the same reason. Dr. Knight said pasteurize to 180. We had been heating it heretofore to 175. We changed.

MR. HOGUE: Did your patrons oppose it?

MR. JONES: Before they did, but with our explanation and recommendation at the meeting, that it would increase the value of the whey by keeping it sweet, they were willing to try it; and when they saw the improvement in the whey, they were most decidedly in favor of it.

MR. HOGUE: There is another meeting to take place immediately, for about fifteen minutes, and we will then continue the discussion.

#### BUSINESS MEETING

Called to order by President Elwood at 9.35 A. M. in the convention hall of Hotel Seneca, with forty present.

MR. ELWOOD: Mr. Huson announces the Breeders' business meeting is in session at the other end of the hall. This is the business meeting of the New York State Dairymen's Association.

Gentlemen, the business meeting will come to order. The first on the program will be the report of the Resolutions Committee, Mr. Giles, Chairman.

MR. GILES: Owing to the lateness at which the committee got together and inability to find a stenographer, we have to report the resolutions in a somewhat mixed form, with which I trust you will bear.

#### RESOLUTION NO. 1

To His Honor, Mayor Edgerton; to the Rochester Chamber of Commerce; to its efficient and courteous Secretary Woodward; to the Management of Hotel Seneca, we, the members of the New York State Dairymen's Association, by this resolution, acknowledge ourselves indebted for their hospitality and courteous treatment, and express the opinion that the great success of this meeting is owing to their thoughtful planning and efficient preparation.

#### RESOLUTION NO. 2

WHEREAS, The idea of the attendance of young men, as advanced by one of the speakers, is worthy of so much attention; therefore,

*Resolved*, That the management be requested to make such arrangements as shall encourage such attendance of boys at our future meetings.

#### RESOLUTION NO. 3

To the speakers who, each and all, have presented their papers in so thorough and expressive a manner, with thoughts so pertinent and advice so practical as to make an attendance here almost a liberal education, this resolution of appreciation is ordered by this body.

#### RESOLUTION NO. 4

WHEREAS, One of the most potent factors for the good of the dairy interests of the state is the Experiment Station at Geneva; and,

WHEREAS, The equipment of said Station is entirely inadequate to its needs; and,

WHEREAS, There is an imperative demand for modern and up-to-date office room, and most particularly an auditorium for the many important gatherings now held there, and the many more that would and should be held there if the accommodations were adequate; and,

WHEREAS, Plans have been made and appropriations ordered by a vote of the legislature, but failed of enactment by executive disapproval; therefore,

*Resolved*, That the secretary of this association be directed to communicate with his Excellency, Governor-elect C. S. Whitman, setting forth the necessity of buildings at the Station sufficient to properly conduct its important work, and worthy of the dignity of the great State of New York; and,

*Resolved*, That the Legislative Committee be directed to urge the legislature, with great vehemence, to make sufficient appropriations for this purpose.

#### RESOLUTION NO. 5

WHEREAS, New York State has been particularly fortunate in having for the head of the Department of Agriculture a man of the ability and integrity of Honorable Calvin J. Huson, who has shown untiring interest in the diversified duties of the office of Commissioner of Agriculture, absolute friendliness for all phases of agriculture, fairness and non-partisan views in matters pertaining to agriculture, coupled with ability to cope with the many perplexing problems which arise in the department; therefore be it

*Resolved*, That it is the opinion of the New York State Dairy-men's Association that the administration of the affairs of the Department of Agriculture, under the guiding hand of Honorable Calvin J. Huson, calls for the highest commendation.

#### RESOLUTION NO. 6

WHEREAS, We are aware that the inspection of dairy barns by the agricultural department, as demanded by state law, is grossly

lax and inadequate—not, we believe, by intent of said department, but for lack of necessary funds; therefore be it

*Resolved*, That our Legislative Committee be requested to appear before the coming legislature, asking for an appropriation sufficient to make the law efficient and competent and to adequately perform the work as contemplated under the law.

RESOLUTION NO. 7

WHEREAS, The prosperity of the dairy and live stock interests of the state is to a large extent dependent upon satisfactory service and adequate transportation facilities being furnished by the railroads of the state; and,

WHEREAS, Enforced expenditures for the employment of more labor than is necessary in the operation of trains, not only seriously prevents railroads from furnishing such service and facilities, but also renders the farmers' competition for labor more severe; therefore be it

*Resolved*, That this association request the Legislature of New York to so amend the present so-called "Full Crew" law of the state as to give the Public Service Commission of New York State full authority to decide all questions arising as to the number of men that shall be required for the safe and efficient operation of railroad trains within the state.

Each resolution carried.

MR. GILES: We have in preparation a resolution referring to the death of our past President, E. H. Dollar, and will ask permission to present this later on.

MR. ELWOOD: The Auditing Committee will now report; Mr. Smith, Chairman.

TREASURER'S REPORT

On hand February 9, 1914.....	\$883 85
By note .....	200 00
	<hr/>
	\$1,083 85
Expenses as per vouchers.....	957 00
	<hr/>

Cash on hand, Treasurer.....		\$126 85
Cash on hand, Secretary.....		71 35
		<hr/>
Total .....		\$198 20
Amount of note.....	\$200 00	
Amount of unpaid bills (est.)....	75 00	
		<hr/>
Total liabilities .....	\$275 00	
Amount on hand.....	197 20	
		<hr/>
Deficit .....	\$76 80	

## SECRETARY'S REPORT

Report of Secretary for expenses incurred in carrying on office work for year 1914:

1914.

Oct.	1.	By amount of cash in bank....		\$0 71
	16.	By deposit .....		100 00
	16.	To cash for postage stamps....	\$10 00	
	16.	To cash to Ogdensburg Wholesale Mercantile Co., for office supplies .....	3 49	
	17.	To cash to Bessie Leonard, services .....	12 00	
	24.	To cash to Bessie Leonard, services .....	12 00	
	26.	To cash for postage stamps....	4 00	
	28.	To cash for postage stamps....	16 00	
	31.	To cash to Bessie Leonard, one week .....	12 00	
	31.	To cash for postage stamps....	6 00	
Nov.	2.	To cash for postage stamps....	10 00	
	3.	To cash for postage stamps....	10 00	
	7.	To cash to Bessie Leonard....	12 00	
		By deposit .....		75 00
	13.	To cash for postage stamps....	4 00	
	14.	To cash to Bessie Leonard....	12 00	
	17.	To cash for typewriter ribbon and postage .....	1 04	

Nov.	21.	To cash to Bessie Leonard.....	\$12 00	
	23.	To cash for postage stamps.....	1 00	
	28.	To cash to Bessie Leonard.....	12 00	
Dec.	2.	By cash for postage stamps.....	2 00	
	5.	By cash to Bessie Leonard.....	12 00	
	9.	By cash for postage stamps.....	7 25	
		By deposit .....		\$50 00
	12.	To cash to Bessie Leonard.....	12 00	
			<hr/>	<hr/>
			\$182 78	\$225 71

Balance, Madrid Bank..... 42 93

Balance, City Bank..... 28 42

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\$71 35

Report adopted.

President Elwood then read the amendments to the constitution, which were voted on, one at a time, and each one adopted.

#### AMENDMENTS

Change Section 1 to read as follows "The membership in the New York State Dairymen's Association shall consist of Annual and Life Members. Annual Members shall be those persons who pay annual dues of One Dollar into the Treasury of the Association. The Fiscal Year of the Association shall end August 31st. The Secretary of the Association shall notify each Annual Member prior to the end of the Fiscal Year, August 31st, when his dues are to be paid. Upon non-payment of annual dues before the end of the fiscal year, a member shall be dropped from the list of Annual Members. A person paying Ten Dollars into the Treasury of the Association shall become a Life Member and exempt from annual dues."

Change Section 2 so that the Assistant Secretary shall be a member of the Board of Directors.

Section 4. Elective officers of the Association shall be President, Vice-President, Honorary Vice-Presidents, Secretary, Assistant Secretary, Treasurer and six Directors, and they shall be chosen at the time of each annual meeting from among either the

Life or Annual Members of the Association, and at the session during which the election of officers is indicated on the program. Every Ex-President of the Association shall be ex-officio member of the Board of Directors for two years after the expiration of his term of office as President.

Change Section 12 to read: "Public notice of any regular meeting of the Association shall be given by the Secretary at least thirty days before the date of the said meeting, and a written or printed notice of said meeting shall be mailed to each member of the Association. All meetings of the Board of Directors shall be called by the President or by any three Directors. The Secretary shall send to each Director a notice of any meeting at least three days before the date of its occurrence.

At each annual meeting the newly elected President shall appoint such committees as he may see fit from among members of the Association, the President and Secretary to be ex-officio members of all such committees."

A discussion here arose as to deficit, and it was brought out that a plan was under way for increasing the membership to 1,000, and that while the supply men had been called upon largely to finance the association heretofore, it was hoped to relieve them of this burden, and in a discussion of ways and means, it was suggested that the granges be used as a method of reaching the farmers direct. It was arranged to send out a brief two or three page report, to be read at each grange, with a view to interesting the members, and increasing membership. Mr. Griffith reported that the department sent out the printed report bulletin to whoever was on the list furnished them. It was reported that the change necessary in the plans of the convention, owing to the epidemic, rendered much previous advertising of no avail, but that the meetings are accustomed to be well advertised, and notices published in papers throughout the state; this letter, however, having to be free press publicity, the association not being able to buy space for the purpose. Three hundred papers were furnished with data this year for the convention.

Mr. Giles here introduced the resolution in re past President Dollar.

*In Memoriam*

In the taking from our midst of our beloved and esteemed Ex-president, E. H. Dollar, we feel that we have lost the companionship of a charming comrade, the services of an earnest, capable co-worker, and we wish to record our love and respect for a man who, through his own sagacity and enterprise, placed himself among the first and foremost as a breeder of pure-bred stock, and left behind him a name alike honored and worthy of emulation by all.

*Therefore, Be it Resolved:* That this resolution be placed upon the minutes of this meeting, and that an engrossed copy be forwarded to the family of the deceased, as an expression of our affection and high regard for a comrade and our deep, sincere sympathy for the bereaved wife and daughter in their affliction.

Mr. Bennett, Chairman of the Nominating Committee, presented the report of that Committee, nominating the following officers:

President: H. C. Elwood.

Vice President: W. E. Dana.

Secretary: W. E. Griffith.

Assistant Secretary: H. E. Jones.

Treasurer: R. R. Kirkland.

Directors: Calvin J. Huson, John Y. Gerow, F. C. Soule, W. N. Giles, E. D. Dietrich, Professor W. A. Stocking, Jr.

Mr. Richardson took the chair, and the report was adopted by a rising vote, and the officers declared elected unanimously.

President Elwood then delivered his annual address and report.

**ANNUAL ADDRESS OF THE PRESIDENT**

H. C. ELWOOD, BUFFALO, N. Y.

Gentlemen: Every President, I understand, must have an annual address. Consequently I shall endeavor to fulfill that duty, but it will be very brief, as I feel that any subject that should come before our meetings will be covered by the different speakers who will honor us with their lectures and talks. To quote from the address of your former President, E. H. Dollar,

in which he stated that "the New York Dairymen's Association should stand squarely at the back of every legitimate undertaking to advance the broad interests of dairymen and agriculture," I can say honestly, that that is the broadest aim and motive of this association.

You all know of the splendid work accomplished by the Department of Agriculture at Albany, under the competent leadership of Honorable Calvin J. Huson; you know what, to a large degree, the New York State College of Agriculture at Cornell is doing: the work of the New York Experimental Station at Geneva, and the other schools scattered over the state, as well as the broad work accomplished by the State Fair at Syracuse.

I feel that all of these institutions should be most thoroughly supported by the state government and should be given ample "sinews of war" in the way of financial support to carry on their various objects and duties. They cannot be successful unless their financial arrangements are ample and given them on time.

Economy, to my mind, should never commence at the doorway to all general prosperity within the commonwealth of New York State. It behooves every organization and every association to see to it that their representatives in our legislature are thoroughly apprised as to the needs of our agricultural and dairy interests, and if each and every man will do his duty toward impressing upon our legislators the importance of supporting the proper appropriations incidental to our objects, much good can be accomplished.

Again quoting our former President, E. H. Dollar — and referring to the agricultural department and through that department to the general agricultural education of the state — "We should have one head, but that should be entirely removed from the demands of political organization, which must of necessity, embarrass the executive in the execution of his duties to the best advantage." I most thoroughly agree with him.

Within the sound of my voice is Commissioner Huson, and I can safely say that no one has ever tried harder to make efficiency his motto in his large department, than he has. I believe today, gentlemen, that the education he has received,

supplemented by the effort which he has put forth to build up his department, should not be terminated for many years to come. In my mind, he should be continued in office removed from any political bias, for the knowledge he has obtained through the strenuous years he has served.

I sincerely hope the time will come when all of the different institutions interested in anything pertaining to agriculture or its diversified lines, will be ordered to send a representative to our annual meetings. We also need the hearty support of the Farmers' Institutes, the different milk associations, the butter and cheese associations, associations of ice cream manufacturers, and the breeders; if through the older body, meetings can be so arranged once a year as to make it, in a short time, of large importance.

Legislation pertaining to any of the diversified lines should be properly looked after by a legislative committee, earnest and competent to serve, and a general report made on every bill that is brought before our state government, said copy of report to be given to the officers and directors elected each year.

All members of the New York State Dairymen's Association are furnished with a copy of our annual meeting and the proceedings, and if we could get the hearty support of a thousand men, the benefit to the community at large would be increased a thousand-fold. When you read these reports, if you have anything to suggest, forward the same to the officers of this association and if it calls for any legislation, it will be carefully considered and transmitted to our legislative committee. If every man will work, success would be the answer.

When I had the honor to be elected president of this association, a friend of mine congratulated me and in a joking way said, "Elwood. what do you know about a cow?" My reply was, "I do not know anything, but my friends do." And so it is with any specific line of work,—you may not know it, but if the right cooperation is given any body of men by those who know — and know well — their line of work, a thoroughly supported body can accomplish great things.

MR. ELWOOD: If there is nothing more to come before the meeting, a motion to adjourn is in order.

Upon motion by Mr. Lange, which was the second, the meeting adjourned at 11.40 A. M.

An informal discussion of butter problems was held after this meeting, a report of which was furnished by Prof. Guthrie.

#### ROUND TABLE-BUTTER PROBLEMS

PROF. E. S. GUTHRIE, CORNELL UNIVERSITY, ITHACA, N. Y.

The butter conference followed the cheese conference during which the importance of a good raw product was one of the principal subjects of discussion. Dr. Guthrie took an inventory of the audience and found that only a small proportion of the people were milk producers. He suggested that it might be advisable to continue the discussion of obtaining a good raw product which is just as essential in buttermaking as in cheesemaking, but to consider it from the viewpoint of what the creamery manager might do.

Professor Guthrie pointed out that tact in these days of close competition is an essential in the successful management of any business. He said, "We have in our audience several managers who have met with success in handling their patrons. I see Mr. Larson who for several years was with the dairy division in charge of the large creamery at Troy, Pa., where the division had some field laboratories. His work was strictly the business management of the creamery. He is now with the Sayre Creamery & Cold Storage Co., of Sayre, Pa. Sitting beside him is Mr. C. P. Van Dyke of the same company whose work is largely dealing with the patron. We also have with us Mr. Loran Isbel, a Cornell man of whom we are proud. He is manager of the Scriba Center Creamery near Oswego. I see Mr. Hagar of Le Roy, Mr. J. B. Rowe of Vernon and Mr. Roy Garbutt of Scottsville, whose experience in creamery work will help us greatly in this conference. It is my duty as leader of this round-table to keep the discussion going, therefore, I shall call on Mr. Van Dyke of Sayre, Pa., to lead this discussion on 'Things to Keep in Mind in Handling the Creamery Patron.'"

Mr. Van Dyke pointed to the necessity of keeping in close touch with the patrons and of knowing what they need. He believes in a friendly and frank treatment of the farmers and that

by serving them in this manner their confidence is gained. He called attention to two important features of his own experience. First, that education in the care of milk and cream, feeding of the herd and even in the management of the farm is appreciated when taken to the farmer in the proper manner. He added that this education may be sent to the farmer through a printed sheet when the monthly statements are sent out, through county farm agents and by personal discussion with the manager himself as to where to go for the proper information, etc. Secondly, he considered that there should be sincere interest in the affairs of the community. He advised many young people to go to college or to take short courses in agriculture. He has helped organized cow testing associations. He claims that in this manner the producers of the raw product for the creamery and the people, who are absolutely the sole foundation of the creamery, are made more prosperous and contented, which reacts directly on the prosperity of the creamery.

Mr. Isbel and Mr. Garbutt seemed to think that the new law regarding the scoring of barns should be executed in butter territories as well as where milk is purchased for city milk supply. Mr. Isbel said that it is very discouraging to reject a patron's milk because of poor quality and have a neighboring creamery accept it. He thought that the state should help the butter industry in this regard as well as the milk shipping industry.

The consensus of opinion seemed to be that many farmers would take better care of their milk and cream if they knew how. The instance was given of one farmer who was a fairly well educated man in many ways and yet was sending poor milk to the creamery. He was visited by a representative of the creamery who found that he was dipping his hands into the milk to moisten them so that he could "strip" the cows more readily. As quickly as he was told his error he saw his mistake. Conscientious effort to help the patron seems to pay.

**BUTTER PROBLEMS**

JOHN SMITH, ARCADE, N. Y.

It is my impression that we, as buttermakers, will have to cultivate our tastes to the wants of our trade if we are to hold our trade. Our customers today demand value received for their money. If we cannot furnish it, someone else will. To become able to make such a fine-flavored article and overcome the defects which our conventions and state fairs point us to by returning our score cards marked "perfect" on everything but flavor, and that scored off from one to five points, should be our study and must eventually be our accomplishment.

The most difficult task in making butter is to get a perfect flavor, and in my opinion we ought to devote more time at our conventions in discussing a question of so much importance. The question is, "How can we get a more uniform and finer flavor in butter?" I do not claim to be able to tell you every defect that has a bearing on flavor in butter but will say that I know of some of them.

The first thing to be borne in mind is that milk is naturally a pure product, and if any milk is found to be unclean or unwholesome, the chances are that it is not the fault of the cow; the presumption is that some person is to blame, either the one who cares for the cow or the one who handles the milk. If those who buy milk used proper care they would have little trouble in always procuring a good, clean article, for it is possible to secure milk free from contamination; and if impure milk is delivered by the dairyman, the creameryman will be held responsible for having accepted an article from which good-flavored butter cannot be made.

When the patron finds out that the creamery where he sells his milk will not accept poor or unclean milk, he will stop offering it. Milk in its natural state is a perishable product, yet with proper care it can be held in a wholesome state a reasonable length of time without doing any injury to its fine butter-flavor producing qualities.

There are natural changes which milk is sure to undergo as soon as opportunities are given it. Thunder storms, impurities, warm temperature and other conditions known to exist when milk

is most liable to give trouble, have often been blamed for its changes, but it is now known that these are only indirect causes and that the changes in milk that bother us most, are due to — and cannot take place without — the presence of minute organisms called bacteria. The peculiar flavor comes from this bacterial action as well as from the volatile oils of some foods. Onions, turnips, cabbage and certain weeds always give milk their characteristic odors and are often some of the causes that produce the so-called off-flavored butter. It is also well to guard against any milk having a large amount of sediment, for particles of dirt are a sign that germs are abundant. This dirty milk may be dangerous as well as disgusting, for the dirt in milk cans consists mostly of particles of dead skin and manure which fall in the pail from the body of the cow during milking. Unclean attendants are also a common source of dirty sediment in milk.

On a well conducted dairy farm, one may expect to find the following conditions, namely, a roomy, clean, dry, well-ventilated and lighted cow stable. To produce good milk, cows must be comfortable, and these conditions not only add to their comfort but they are absolutely necessary to keep them in good milk-producing shape. To assure a healthy cow, she must be kept clean, well fed, contented and have access to an abundance of pure water at least twice a day. The feed must be of good quality and the grain and coarse fodder should be free from dirt, decayed matter and musty condition. Provision must also be made for the thorough sterilizing of all the utensils that come in contact with the milk, also for straining and cooling the milk in a clean atmosphere, free from all stable odors. This should occur immediately after milking. Facilities for storing and keeping the milk properly must also be provided and thorough cleanliness in everything pertaining to the dairy should be practiced. Whitewash is a good disinfectant and should be used in a great many more stables than where it is at present. The bedding of cows should be clean. If the foregoing conditions, as I have outlined, are followed it is not the fault of the patron for the poor flavor in the butter.

If the buttermaker has his creamery disinfected with an anti-

septic which is applied with muscle and brush, he can in that way prevent the development of foreign germ life. No butter-maker has a right to complain of the condition of his patron's milk if his creamery is dirty. He should ripen the cream by giving it the desired amount of acidity and no more than the desired amount. Some use a starter with good results and some have good results without using a starter, but I prefer the starter. Give the cream the desired amount of acidity — about one-half of one per cent. — before leaving it for the night, using alkali test in determining the acidity of the cream when the cream has developed sufficient acid. Then cool it down to about 48 to 50 before leaving it for the night, and between then and morning it takes very little acid. I churn the cream at one-half of one per cent. acidity at a temperature of 48 to 50 degrees. The best way to obtain results is for every buttermaker to make some butter which according to his own notion is best, book it down just how it was made; then send the butter to a good butter judge in New York or to any market where he ships to, and have the judge point out to him the faults he finds with it, and so keep on until he gets to the point where no fault can be detected. After he has reached this point, then he can refer to his vest-pocket book and see just how this butter was made, and from then on he will have a good plan to work by.

But we must also keep in mind the proper facilities as to the building, machinery, etc.; also cleanliness and quality of milk. Other things must necessarily right themselves if the foundation work, as I have outlined, is rightly attended to.

#### JOINT MEETING OF DAIRMEN'S AND BREEDERS' ASSOCIATIONS

The joint meeting was called to order at 11.15 A. M., Commissioner Huson in the chair.

CHAIRMAN (addressing the Dairymen): I am very sorry indeed that your interesting discussion was cut short by the necessity of taking up the regular program of the joint meeting. The same thing occurred in the other room, where the Breeders were engaged in a very interesting discussion on "Horse Breeding Problems." But our program is full and we have to keep as near the schedule as possible.

I now have the pleasure of presenting to you Deputy State Commissioner of Health Williams, who will speak on "The New Sanitary Milk Code," a subject of great interest. We are very fortunate in having Dr. Williams here this morning.

#### THE NEW SANITARY MILK CODE

DR. LINSLEY R. WILLIAMS, DEPUTY STATE COMMISSIONER OF HEALTH, ALBANY, N. Y.

Mr. Commissioner and Gentlemen of the State Breeders' Association and State Dairymen's Association: I am extremely grateful for an opportunity to present this subject to you this morning. I am reminded of an old story — which probably most of you have heard — of Artemus Ward, when he began to give a lecture said to be upon "milk." He said the best thing he knew on milk was cream, and then began discussing a pleasure trip in Persia or something of that kind. I will try to be a little different from Mr. Ward and stick close to the subject.

I want to remind you that it is a matter of some fifty odd years since the public became interested in milk as a food and its method of production. It is a matter of over fifty years since regulations and restrictions were made upon the feeding of dairy cattle. At that time, in large cities, it was the custom to feed dairy cattle on distillery waste, and it was the custom to herd cattle in close quarters, and they produced milk which was not suitable food. That is not done to-day, owing to intelligence and restrictions. After a matter of fifteen or twenty years people began to learn that there was such a thing as a cream line on milk, and they expected to get a certain amount of cream on milk which they purchased. They felt that if the milk looked too blue they were being defrauded. As a result of that, restrictions were placed on chemical constituents of milk, demanding that there should be a certain amount of butter fat and solids, and you are fairly familiar with these chemical standards.

Some years later — now a matter of nearly fifteen years — the question came up as to the physical conditions of the barns and dairies where milk was produced, and those conditions were quite carefully studied by the United States Bureau of Animal Industry and members of the department of agriculture in this

state and numerous other states. They came to the conclusion that it was possible to state, fairly definitely, under what conditions milk should be produced, and to specify, in a numerical way, just what should be allowed in the equipment of a farm and a dairy, as well as the method of producing the milk. That I may call the physical standards for the control of the milk supply.

More recently another feature has been injected into the milk supply. It has been brought about because it was learned by sanitarians that bacteria existed in milk. It has been known that milk was used as a medium for growing bacteria — that certain bacteria would grow more rapidly, and develop in larger numbers, than in any other media. It was found particularly true of certain types of lactic acid forming bacteria, and with the bacteria which caused typhoid fever, and that which caused blood poisoning, known as streptococci. And from that it was wondered whether it would not be possible to find bacteria normally living in milk, or introduced in the milk accidentally. It was so found and traced quite conclusively that certain cases of disease — typhoid fever, diphtheria, scarlet fever, tuberculosis, and some others — could be definitely traced to the consumption of milk in its raw state. And that brought about what was known as a bacteriological standard.

Then having learned that there was a possible danger from raw milk supply, steps were taken to find out how one could destroy the bacteria in the milk and be able to carry on a milk supply that would be satisfactory, and would be safe for human consumption. It was found very readily that heat was a satisfactory method of destroying these bacteria, and beginning about twenty years ago or more, the attempt was made to follow out what was described by Pasteur as a method of heating milk which would destroy the bacteria. That method was known in France and Germany in heating beer in order to preserve it and was applied also to milk, but this was done largely in the homes by people who prepared milk for children. It was found that milk which was brought to a boil caused the formation of a scum on top. This was removed and the milk was fed to children. It was found that a few children fed in this way developed symptoms of scurvy. This led to a rather universal condemna-

tion of pasteurization by physicians and health officials generally, and such a condition held until about eight years ago. Beginning eight years ago, it was learned that milk could be heated to a point sufficiently high to destroy all the bacteria but not high enough to coagulate the albumen. Sanitarians then began to specify just exactly what pasteurization meant and what it should mean.

The intent of the sanitary regulations controlling the production of milk has three definite objects. (I think it may surprise you to hear that we have had in mind these three definite objects.) One is the protection of the consumer, one is the protection of the dealer, and one is the protection of the dairyman or producer, or the man who actually produces the milk on his own farm. The consumers, of course, include the largest number of persons to be considered — numbering, I presume, nearly five million people — because most everyone uses milk in some form.

I should like to point out again, a little more in detail, why the consumer should be protected. The consumer buys a bottle of milk, and the average person thinks that milk is milk and is a good food, and so long as it is not sour it is perfectly safe and wholesome. It has been likened to water by some. We think water is wholesome so long as it looks clean and tastes clean and does not have an odor. We know perfectly definitely that water may look clean and may taste well and may have no odor, and yet may cause a serious disease by reason of its being infected with certain bacteria. We know that in the Spanish-American war, in 1898, a highly important government official took a sample of water in a glass at one of the camps and said, "It looks good," and tasted it and said, "It tastes good, and it must be all right." That was only a matter of sixteen years ago, and yet he felt that was a perfectly safe test for water. We know well that there have been a number of cities in the state where the water has looked and tasted good, and the citizens were sure it was safe, and yet they have had a constant death rate that was higher than in other localities throughout the state. By the introduction of one single process it has been possible, by the addition of chlorine, to kill all the typhoid germs, and you notice a marked reduction in the cases of typhoid fever.

We know that milk may contain, almost at any time, the germs of bovine tuberculosis, typhoid fever, streptococci, diph-

theria bacilli, or the unknown organism which causes scarlet fever. It is very hard to make a man who has lived on a farm all his life, and where his father and grandfather have lived before him, and where they have heard of milk being a source of danger — it is hard to make him believe that because he had typhoid fever thirty-five years ago he may still have living typhoid bacilli within his intestine; and that it is very possible to transmit those bacilli to the ends of his fingers and into the pail, and to contaminate the milk supply. Not only would that milk be contaminated, but all the milk with which it is mixed as it goes to market. A number of typhoid epidemics have been caused in just this manner. It is extremely difficult to get the average producer to believe that that can be a fact — that a man who has had typhoid fever thirty-five years ago may be a source of danger.

Tuberculosis is a little more evident, because the farmer sometimes can see that his cow has tuberculosis. It can be demonstrated to him that the cow's udder is diseased, and he can realize that that milk is not fit for consumption. With the other diseases it is exactly the same condition as with typhoid fever. We know that it is almost entirely impossible to make a man believe that diphtheria and scarlet fever can be transmitted in milk — although this is possible. It is the duty of the health officers to protect the consumers from dangers carried in milk.

The other way in which the consumer ought to be protected is in getting what he pays for. If a man pays five or six or seven cents a quart for milk, he has the right to expect that he gets a certain quality of milk; he has the right to obtain a certain amount of butter fat; he has the right to expect that it is safe and will not cause him disease; he has the right to expect that it is fairly free from the introduction of cow manure. If he has not this, the man who produces milk in a cleanly fashion and the man who produces milk in a dirty fashion may receive the same price for his milk; and if the consumer pays five cents for a quart of dirty milk and five cents for a quart of clean milk, he may not know the difference by the taste. He has the right, we believe, to be able to purchase milk and get full value.

In what way may the dealer be protected? If a dealer is seli-



FIG. 336.—DR. LINSLY R. WILLIAMS



ing milk of a certain type, clean and free from dirt, and free from disease germs, he is entitled to command a higher price for that product than the man who is selling milk from herds in which there is tuberculosis — from a farmer who may have had typhoid fever, or from a farmer who has a dirty barn and dirty cows.

Also, the man who produces milk in a cleanly condition is entitled to a higher price for his milk than the man who produces it in a dirty condition. The same way as a man with a piece of shoddy cloth is not entitled to the same price as pure wool. In other words, milk should command a higher price for the higher grade. That is one of the chief reasons for the grading of milk.

I should like to try to explain to you, rather specifically, the reason for each of the regulations of the Milk Code. They are not very numerous and I should like to go over them with you in more or less detail.

The first regulation requires that a permit shall be issued by the health officer, so that he may know every dealer who is selling milk in his community, and so that no one may be allowed to sell milk which, as I have tried to point out to you, may at any time be a source of danger.

The second and third regulations control the application. The application for the permit states where the dealer resides, where he expects to deliver his milk, and has, on the reverse of it, a space for the names and addresses of the different dairymen — the different producers who produce the milk and who expect to deliver the milk to the dealer. The name and address of every dairy farm producing milk in his community is given to the health officer, so that he has an opportunity to go to each farm, examine it and score it accordingly.

The fourth regulation requires that each and every one of such farms shall be examined by the local health officer or by his representative, and that this shall be done before the issuance of a permit. It has been found that in a number of the larger cities there are so many dairy farms supplying the city that it has been impracticable to score every dairy before the issuance of the permit, and that is a matter which, of course, we realize will not be forced at the present time.

The fifth regulation is one which requires a reasonable amount

of cleanliness in the stores that handle the milk, and requires that there shall be a minimum score of every dairy farm — which is 40 out of a possible 100.

The sixth regulation refers to the renewal of a permit, which says that the farm must be reinspected or rescored within six months preceding the renewal of the permit, and the renewal is good for one year.

The seventh gives the right to the health officer to prescribe under what conditions the permit shall be displayed.

The eighth regulation requires that milk and cream shall be kept cool and covered, and free from dust, dirt and insects.

The ninth refers to bottling, and this is a matter which has caused a great deal of adverse criticism, for the simple reason that it was not understood. The regulation states that bottling shall be performed at the dairy — that is, at the place of production — or at a collecting station or creamery. Now a certain number of people, producers and dealers, have assumed that because it states that the bottling shall be done at the dairy, that means that all milk is to be bottled. The regulation does not say so, nor does any other regulation say that all milk is to be bottled. It does specify which particular grades are to be bottled, but all milk is not to be bottled — that is not so.

The tenth regulation practically reaffirms that portion of the Agricultural Law which applies to the containers used for the transportation of milk — the milk cans and receptacles used. If they are in a bad condition they may be condemned by the authorities.

The eleventh requires that all utensils shall be kept in a cleanly condition.

The twelfth refers to pasteurization, and it provides that pasteurization shall be done in a certain way. That is a matter which is of considerable importance. It was found, when pasteurization was first generally introduced, that the simplest way to do it was to have the milk passed over a coil, and that was known as the "flash" system. It was found that if milk which contained 500,000 to 1,000,000 bacteria was introduced into a pasteurizer of that kind, after it passed through the process it contained anywhere from 10,000 to 30,000 bacteria. It has been

known by the dealers, and by the men who are dispensing milk largely, that such a procedure will keep milk much longer if it is promptly sealed after it is pasteurized — consequently it has been quite largely used. It happens that the temperature of a pasteurizer might vary between 135 and 165 degrees. It is also known that at places a little thin scum of milk may collect, and that the particular milk which passes over that scum is not heated to as high a degree as the milk which comes directly in contact with the coil, with the result that the milk is inefficiently heated; and it has been found, on careful examination that the so-called pathogenic or disease-causing bacteria are not always entirely destroyed. Dealers will tell us that they have a “flash” pasteurizer which is practically efficient — which reduces the bacteria from 1,000,000 to a few thousand. But it has been found time and time again, by bacteriologists competent to understand, that the tubercle bacilli are not killed always by such process, and that such-milk is not always a safe milk to use if it contains typhoid bacilli or other organism.

The regulations require that unless the local authorities have made special provision, the pasteurizing shall be done by what is known as the “holding” process — that is, that the milk shall be pasteurized in bulk and held at a temperature of not less than 145 degrees for 20 minutes. It has been found that if the cover of the container is left off, a certain amount of milk may rise to the top, and that this top milk may contain bacilli which are not completely destroyed; so it must be in sealed containers while being heated. We know that if heat is applied for 15 or 20 minutes the majority of the contents of the can or container is heated to the temperature of the water outside, but a certain amount of the milk does not get heated to the proper temperature. So the regulation asks for a longer period of time than would seem necessary. It is a simple matter to put a can of milk in another larger vessel containing heated water, and then see how long it takes the central part to heat — it takes some time. The regulation asks for 30 minutes. The milk that has been pasteurized must be immediately put into a sealed container, and then not pasteurized again.

The thirteenth regulation (considered by some to be unlucky,

for other reasons than its number,) applies to the grading of milk. The grading of milk has been a matter which has been considered by health authorities for the past seven or eight years. It has seemed to the council that passed these regulations, that the grading of milk should be placed at as near a minimum as was possible — and if I may begin from the lower part and go up, instead of beginning at the top and going down, I think I can show you just why they felt so.

“Grade C” milk is milk upon which the score of the dairy is not less than 40. A score of 40 means that almost any farmer, no matter how dirty his barn, no matter how slight his help, with little intelligence, and no expenditure for equipment; without a concrete barn, without whitewash, without tight ceilings, without anything except a little bit of cleanliness, can produce milk in “Grade C” class. Now if he does not want to use his intelligence, and does not want to try, he may not be able to get into that class. But on a certain number of farms which I have personally seen, which, in my judgment, scored 30 or 35, the farmer has been able, with a few suggestions, to raise his score from 35 to 48 or 50 without any additional expense. And that is the first step we would like to see carried out — that all dairies are brought into “Grade C” and acquire a scoring of 40.

While referring to the scoring, I should like to mention several of the specific things in the score-card. The score-card adopted is the one used by the United States Bureau of Animal Industry, and which Professor Pearson was so much interested in some years ago. This particular card was then adopted by the New York Department of Agriculture. It was endorsed by the Dairy Instructors' Association and was adopted by the State Department of Health, with just one modification — and that modification is one of leniency. It divides the score into that for equipment and that for method, and gives an opportunity of 40 points for equipment and 60 points for method. Under “health” a score of 6 is allowed. Cows, if apparently in good health, 1. If tested for tuberculosis within a year and no tuberculosis found, and all reacting animals removed, 5. We feel that if milk is pasteurized by the “holding” process, all tubercle bacilli will be destroyed, and that is a substitute for that test. If milk is pasteur-

ized by the "holding" process the score will be the same as if tested with tuberculin. That gives a man an opportunity to increase his score very largely if he has the milk pasteurized, whether by himself or by the dealer who purchases from him.

Under the "condition of the stables," the scoring is divided up into a number of items as to the surroundings, light and ventilation, and so on. Then the utensils have an extremely large score, and a certain amount is allowed for a milk-house. When it comes to the question of method, if the cows are well cleaned they get a score of 8. If they are free from visible dirt they get a score of 6 out of that possible 8. The cleanliness of milking scores fairly high. The utensils score higher than the stable does. The handling of the milk is scored high, especially referring to the handling of milk. The one particular item which scores higher than anything else is the washing of the udders before milking, which scores 6 points if they are washed and wiped before milking. The cooling of milk to below 50 degrees (which in this climate is eight months out of the year) is 5 points. We have found that on method it is not very difficult to acquire 35 or 40 points without any additional expense on the part of the dairyman.

Now I do not want to bore you with details, which most of you will forget unless you are interested. If you are interested you probably have a copy of the Code, or are familiar with it. "Grade C" is the lowest, and I want to compare it with the grades in the City of New York, which is the largest milk-consuming center in the state. They have no "Grade C," except as used for cooking purposes, and all milk sold as "Grade C" is sold for cooking purposes only and must be so labeled. That is not so in the State Code.

Under "Grade B" a little more stringency is placed. They must score 55 in the "Grade B pasteurized" and 60 in the "Grade B raw." "Grade B raw" does not exist in New York City — they have a "Grade B pasteurized" quite similar to the state. We have reduced the score, feeling it was not possible to obtain it at this time. "Grade B raw" is not allowed in New York, but is allowed here, and there the pasteurized has a higher score than we have.

The same is true in the city with "Grade A." For "Grade A pasteurized" we require a score of 68, and the city requires 75 on a score. In "Grade A raw" the city requires 93 and the state 75.

So we have attempted to make a reduction all along the line, so that the Code would not impose hardship. As to the matter of enforcement of the Code, our idea has been that all persons should be given a reasonable time before any attempt was made to enforce it. We feel that any direct misrepresentation should be stopped. For example, if a man who is selling ordinary milk which has not been examined by a health officer attempts to sell such milk, which he is calling "Grade A," he is taking an unfair advantage of his fellow dealer, and we feel he ought not to be allowed to do it. But we feel that where a man is honestly attempting to do what is right, he should be given time to make his improvements and change his conditions so that he can get a better product on the market, and so that he can get a better price for that product.

We have made several rulings—where there apparently was a misunderstanding in the Code—which seem to us to explain a little further what we mean. For example, a number of people have asked us, "What do you mean by a dealer?" We mean that a farmer who operates a regular milk route is a dealer and must have a permit, and that a man having cows of his own who also buys milk from other farmers is also a dealer. On the other hand, a man who has cows of his own and sells only a few surplus quarts to his neighbors, whether the milk is called for by his customers or delivered by him, is not a dealer; that is, we could not expect that a man on the outskirts of a village, with two cows, who needs only six quarts of milk himself and takes the excess to his neighbors, would be considered a dealer.

Then the matter of labeling the different containers has been questioned, and we have devised a certain circular which gives the color and the title of the different grades on the reverse of it. The majority of people throughout the rural districts, and throughout the smaller villages, will probably not be able to produce anything but "Grade C" milk. They say, "It is impossible for us to afford to have caps printed for bottles; we cannot

afford it." The answer is, they do not have to have caps, because they do not have to bottle their milk. They say they cannot afford to have these tags printed. All that is necessary is to buy a bottle of ink and a few labels; write on them "Grade C raw" and tie them on the cans. It does not seem like a very great hardship to do that. But when it comes to milk that is to be bottled, whether "Grade B" or "Grade A," he must have the label on that cap before it is delivered, specifying whether it is "Grade A raw" or "Grade A pasteurized," or "Grade B raw" or "Grade B pasteurized."

Then the question has arisen about the examination of cattle. To sell "Grade A" milk the cattle must be examined by the tuberculin test at least once a year, and reacting cattle excluded. The regulation requires that test to be done by veterinarians approved by the State Department of Agriculture at the expense of the dealer, unless the Department of Agriculture is able to do it free of charge, which their appropriations generally do not admit. Then for the "Grade B raw" the regulation requires an annual physical examination of the cattle, which is done in the same way by veterinarians approved by the department.

Now to recapitulate: the attempt of the regulations is, primarily, to protect the consumer, and give the producer and dealer a means of securing a higher value for his product. If he receives a higher value for selling a higher grade of milk, of course the ultimate cost comes upon the consumer, which he pays for protection against possible danger from disease and for protection against fraud. And the endeavor has been made to make the regulations as reasonable as could be, with safety.

The majority of the larger cities throughout the country do not have a grade of milk as low as "Grade C raw," and we have received from health officers and sanitarians, in the scientific press and by personal letters, very severe criticism — that we have no business to allow milk as low as "Grade C" to be sold in New York State. We know if "Grade C" were abolished today, it would mean that a large amount of milk sold in the state would be illegally sold, and we would not be able to enforce the regulation at all. And regulations which cannot be enforced had better not exist. So, the attempt has been to be reasonable in the regu-

lations, to protect the public and the consumer and the dealer; and we have tried, in our local meetings of health officers with our supervisors, to call in the dealers and to talk to them, to try to explain what we are attempting to do and what the situation is, and get them to cooperate with us in carrying out the intent of the Code, even if it is not possible to live up to every technicality of the regulations.

In am here to answer any question so far as I can, and shall be glad to have you take part in the discussion.

### DISCUSSION

MR. DANA (in the chair): Gentlemen: Your know sometimes in having a thunder shower comes up in the west and we farmers run over the dinner hour to get that hay in. We are in that position now. We have a representative from the State Department of Health and one from the State Department of Agriculture, and the Sanitary Inspector. If there is anything you can get out of these gentlemen I want you to get it.

I will say one thing: when the health officer of the state of New York says that a man who pays six or seven cents a quart retail for milk expects clean milk, I want to deny it. He ought to pay the price. He says, again, sanitarians have been discussing the problem of grading milk. The Western New York Milk Association took that ground ten years ago, that we ought to have a grading so that people would know what they get and then pay for it.

Have you any questions to ask?

QUESTION: I should like to ask the doctor, "If the customer gets his milk in a good condition, and he is careless when he gets it, will the bacteria grow in it?"

DR. WILLIAMS: They certainly will if the milk is not properly taken care of in the home; it will become sour. And even if cared for in the ordinary way, it may become sour from germs already in it. But if it has been pasteurized it will not have the germs of typhoid fever or many other things.

May I answer the question which your chairman made as an assertion. I know you pay nine and ten cents a quart for a good

grade of milk. In New York City they pay ten cents a quart for pasteurized milk, and poor people are paying for it. I know poor people who are buying milk and paying fifteen cents a quart. In New York City, where they have been educated, there is a demand for such milk. There is not the slightest danger in the world that the health authorities will make any suggestion as to what milk is worth, or what the consumer will pay for it. But they will be educated.

DR. PATCHIN: In regard to the contamination of the milk after the consumer receives it, I would say that that is a matter largely of education. I am sanitary supervisor of this district for the State Department of Health, and the activities adopted by the State Department of Health, through its supervisors, are working out considerably to the end that milk dealers in the near future will not have the trouble with their customers that they are having today. Education is the only remedy or solution of the problem. You cannot put a label on your bottle and tell them to keep it right—they will ignore the label. But education, coming through the local health officers and local health regulations, will ultimately effect this.

MEMBER: About the price of milk. The farmers say, "We don't get enough for our milk." Whose fault is it? I say it is the dairymen's fault. Why? Because they do not stick together. If they would stick together and say, "We want so much for our milk," they would get it.

MEMBER: I should like to ask the doctor if they have issued any regulations fixing the number of cows, outside of the general rule which he read? (Referring to the number of cows a man might keep, disposing to others and yet not be classified as a dealer.)

DR. WILLIAMS: There was no specific definition of it. It was just that if he gave it out to his friends, so long as it went into their containers, he was not a regular dealer.

DEAN COOK: Do you think you will have to do that? Supposing a man has five, six or seven cows, in little towns of 3,000. Enough of those people would drive the dealer out of business. That is just now the situation in Canton, where I live.

DR. WILLIAMS: That is merely a definition made by the department, and that definition can be changed if it is found that it is taken advantage of.

MEMBER: I should like to say that two-thirds of the milk furnished in our town is furnished by the small dealer. That is practically driving us out of business.

MR. DANA: I look at that proposition in this way: the health statistics are showing that our death rate upstate is higher than the death rate in New York City, and I, as a man who loves the farm and the country, do not want that condition. I believe a large amount of it is due to the fact that we have been slighting these regulations in our little villages; therefore I believe they should be put under supervision.

DR. JORDAN: I regard those statistics as somewhat fallacious — if I may be permitted to express an opinion. The country has been, in New York, a place out of which the young people have gone, and the older ones have been left; and just in that change of location you get a relation of death rate which, in my judgment, makes the statistics somewhat fallacious. I am not prepared to fully accept them.

I wish, if I may, to bring up the question of the score-card. I do not speak of this in the way of criticism, for I realize that the score-card is a step in the evolution of milk standardization. Some of us have come to feel, through long-continued and somewhat close observations, that there is no necessary relation between the score-card and the actual condition of the milk from the premises scored. I suspect the Department of Health probably has in mind, so far as possible, applying a more exact standard in the examination of milk.

We have found, at the Experiment Station, in some instances, that milk which scored high in actual examination, came from barns which scored very low — simply because the particular factors that are essential were attended to and the non-essential factors, which a score-card would recognize, were not attended to. The Station is likely to be criticised in the future. We have been at work on the factors that affect the quality of milk. I made up my mind, some years ago, that the general tendency was

to make good milk more expensive than was necessary. We have a big body of consumers who cannot pay for milk that is certified along strictest lines, but who are entitled to good milk. Attention to a few essential factors — which, for instance, do not include the walls of the barn, but which do include a few things, — and centering attention upon those factors, would give us milk that is good enough, and would not make the situation so expensive as it is.

One of the best friends of agriculture in the state, has argued that we are encouraging nastiness. We do not encourage nastiness. We do believe that a nasty environment — and by “environment” I do not mean the cow, man and milk utensils, but I mean the building — may make it more difficult to have the essential factors right.

We shall probably publish the results of our investigations, which may be taken by some of you. I make these explanations so that you will not misunderstand us. We are simply trying to point out the factors which need closest attention, such as the cow, the man, the pail, and the care of the milk after it is drawn. I hope the State Department of Health will, so far as it can, encourage the other method of standardization, namely, direct examination of the milk, rather than taking the score-card as the basis.

DR. WILLIAMS: Some of you may remember that last winter the members of the Grange were interested in trying to improve health conditions throughout the state, and some of them stated that the death rate in the rural districts was higher than in the urban. A number of members took exception to that and made statements similar to those by Professor Jordan. I do not know whether Professor Jordan has made a study of the state according to sex and movement of population and a number of other factors, which we did last winter. In the last analysis, as nearly as we could get in the corrected death rate — correcting it for various factors which came in — we found there was still a distinct balance in favor of the urban condition, and I am quite ready to substantiate that with figures — although we say that figures can often lie.

Now in regard to Professor Jordan's second contention, I want to say that we feel very much like a professor of mathematics who does not believe it is quite wise to go from the rule of three into calculus. I attempted to point out this morning that the milk could be very much improved by simple methods, and by pointing out the things in the method of production rather than in the equipment. It is not necessary to have a concrete barn and all this extravagant equipment—it is not necessary or required.

In some places men who want to have "Grade A" milk cannot get a bacteriological count made. On the other hand, especially along the Vermont or Massachusetts border, we cannot get a scoring done, and have to accept, instead of scoring, a bacteriological count. There are other tests being developed—sedimentation tests—and some very excellent work being done at the Experiment Station, and if that proves successful it is going to be added to our equipment for examining milk, and things will be made more equitable in the future. But this is a start.

PROF. STOCKING: I wish to express my approval of what Dr. Jordan and Dr. Williams have said, and add one more word.

The score-card is useful as one means of knowing the sanitary quality of milk but we must not overestimate its value. It will help us to appreciate the situation if we bear in mind the way in which the score-card has been developed. When our former Commissioner Pearson and a few others got together to formulate a score-card there was practically no definite information available on the numerical value of the different factors and operations connected with the production of milk. The score-card was therefore made up on the basis of the judgment of these men. No one knows the exact value of a small-top pail nor the exact value of the washing of the udder, nor of any of the other factors that go to make up the 100 per cent. on the score-card, so that the whole thing is more or less of a conjecture. We feel that the important factors are included in the card but it may take a long time yet before we know very definitely the exact value of each of the different factors. We are awaiting with a great deal of interest the results of the Experiment Station, which will tell us how many points should be given to the small-top pail, and the cow's body, and to other items which are now included in the

score-card. I think we all agree that, after all, the bacterial count of the milk is the thing which gives most nearly an index of the exact condition of the milk. I hope with Dr. Jordan and Dr. Williams that it will be only a short time before this can be included in the basis for scoring.

We must recognize the fact that the farm score may not necessarily indicate accurately the quality of the milk which a man delivers. We have in Ithaca several striking illustrations of this. We have men there who have for several years delivered milk with a bacterial count of less than 10,000 and yet their farms score lower on the score-card than other farms which produce milk running from 50,000 to 100,000 bacteria. We must recognize these discrepancies. In the carrying out of these new regulations the men who score the farms must recognize that the score-card is not an absolute record of the quality of the milk. We must wait for further light and research before we will know definitely the relative value of the different points. In the meantime the score-card is of much value as a means of showing the points where improvements can be made without great expense.

DR. MCCARTHY: You must remember that the Health Department is not in conflict in any way with the agricultural interests of this state, but in every way is trying to help them. Only a short time ago I learned that one agent sent into the city of Rochester four carloads of condensed milk. Those cows were milked on the Western slopes. This year he has sent into the city of Rochester twenty carloads of condensed milk.

The Health Department — I think Dr. Williams will allow me to say — is merely acting as an educator, as an adjuster, between the different interests, and the Health Department is trying to educate the people to take the proper care of the milk in their homes. They are trying to get the producers together, and to adjust this difference of the producer not getting the proper proportion of the amount that the consumer pays for the milk. You must remember that not only is milk examined by the Health Department, but also the health of the people who handle that milk, for the protection of the agricultural interests. For instance, the score-card is not the only thing the health officer uses — he finds out when the last case of typhoid fever was on that farm, or if any person employed on that farm had typhoid fever.

I believe if you will only give the Health Department a little opportunity, you will find that you will have the greatest assistance you ever had, and there will be a demand for pure, fresh milk direct from the cow, and not "Carnation" milk from the Pacific slopes that is interfering with the milk production in the state of New York. Just give the Health Department and the health officer an opportunity, and I assure you that you will find that we are only trying to educate you, and to bring things about for the betterment of the consumer, the producer, and the dealer.

PROF. SANBORN: I had occasion to pick up a can of condensed milk a couple of years ago and to investigate its value. I found that the cost of that milk was at least sixteen cents a quart, diluted. I found also that it contained more bacteria — in other words, it had a nastier source. So that men who bought it were paying more. I wonder that the boards of health do not throw safeguards around condensed milk. As a matter of fact, you pay more for the food value contained in it. I think the producers themselves ought to search that matter to the bottom.

MR. DANA: I have two or three questions to ask. I should like to ask the doctor, on behalf of the shippers here, where shall "Grade A" be bottled, when it is shipped from the country to the city of Rochester?

DR. WILLIAMS: It will be accepted if it is properly shipped. "Grade A" milk can be produced in the country and shipped in here and bottled.

MR. DANA: The next question is about the tagging of milk of producers in the country, who ship milk to a distributor in the city. Must he, the producer in the country, have a tag and apply it to his can?

DR. WILLIAMS: It is to go on from its source to the finish. Each can must be tagged "Grade A," "Grade B," or "Grade C."

MR. DANA: Has the department made any ruling as to the small-top pail?

DR. WILLIAMS: There is no ruling by our department.

MEMBER: Does the same apply to cream as to milk?

DR. WILLIAMS: Anything that has been said about milk applies to cream also.

DEAN COOK: Does this disturb the present manner of certification?

DR. WILLIAMS: Not in the slightest. It just reaffirms that portion of the law in regard to certification.

MEMBER: The score-card referred to — is it a state or a city card?

DR. WILLIAMS: State.

MEMBER: How does it compare with the New York City card?

DR. WILLIAMS: They are not exactly the same. The New York City card divides it up more in detail. We thought this was a more moderate thing for the start.

MR. DANA: I have looked over a number of scorings and they have been eminently fair.

MEMBER: Who is to make this inspection of the dairy, a health officer or a veterinarian?

DR. WILLIAMS: The health officer.

MEMBER: What does the health officer know about cattle?

DR. WILLIAMS: He may not know very much about cattle, but he may know something about milk, and he may know something about the scoring of milk, and in case of a dispute the code states he may appeal to the Commissioner and an inspector will be sent to adjust it. He does not have anything to do with the physical examination — that is to be done by the Department of Agriculture.

MEMBER: Where can we procure these score-cards?

DR. WILLIAMS: They can be procured from the local health officers. I have an idea you can get in the highest grade without changing the barn — it only marks off one point.

**MEMBER:** I have a score-card here which I should like to have read. You say a man need not have a cement floor to have "Grade C raw" milk. He has given me "Grade C raw" and I have cement floors, and my stable is cleaned three times a day and the cows are cleaned in the morning. I should like you to read it and see the score I have.

**MR. DANA:** Mr. Marshall, who has charge of the scoring here in this city, will go over that score for us.

**MR. MARSHALL:** In "equipment" he stands only  $20\frac{1}{2}$ , and 30 in "methods." Now you look at "Grade B raw"—it should stand 23 on equipment and 37 on methods. Our dairy inspector brought this in and I graded it. (Mr. Marshall then proceeded to read the various items on the score-card, with the scorings allowed.)

Now, if you want to hear any more about that, the man who made the inspection is somewhere in the room. I could not grade that stable any higher than "C." I am fair about this thing and would like to do all I can, but could not do any more under the circumstances.

**DR. WILLIAMS:** I should like to say one word about that card. That is a very fair score for a person who has not been attempting to get a high-grade of milk. The question that comes up there is: he has a scoring of  $50\frac{1}{2}$ —he needs a scoring of 55 to sell "Grade B pasteurized." The only additional thing he needs to put it in "Grade B pasteurized" is to have his cows examined once a year and have the milk pasteurized. That may or may not give him an increased price for his milk. To get into "Grade B raw," all he needs is to have his physical examination once a year and some very simple modification in his method. The thing a man wants to do is to find out just why he is in "Grade C." He is in "Grade C" because his cows are not examined. If his cows are examined and tuberculous animals are removed, then he is in "Grade B pasteurized," and with very little modification and without any additional expense—perhaps twenty minutes more a day will put that into "Grade B raw."

MR. DANA: The reason I asked about the small-top pail was that he does not give anything for it. He can jump 5 points by the small-top pail. My idea was that the department give us a ruling on the size of a small-top pail.

DR. WILLIAMS: That is a very good point.

MR. DANA: In regard to this: I happened to have a pail that was larger in the opening than others; I set it out and the boys used it.

Is there any other question on this subject?

DR. BREED: That is one question I should like to ask which seems to me fundamental. We really have, at the present time, more or less of a double inspection of our milk supply. We have the health question and the health inspection of our milk supply; we have also an inspection for adulteration and protection from fraud. That necessarily involves the authority of the two departments. If they would care to discuss it, I should like to know just how they believe the field should be covered? It is a very difficult question, but is one of fundamental importance.

MR. DANA: Well, I have asked both of the departments — not the Health Department directly, but through their Sanitary Supervisor, and the Department of Agriculture directly — and I have assurance that they are endeavoring to work in harmony, and I believe they will. Gentlemen, it is too vital a matter for any petty thing to come in between so large a man as Dr. Biggs and our Commissioner of Agriculture, Mr. Huson.

MEMBER: Has any regulation been made to govern the veterinarians in making the physical examination?

DR. WILLIAMS: None by our department, except the regular examination as made by the Department of Agriculture.

MR. DANA: I wish to say this about physical examination and the bacterial count: lately there has been some work done, under our observation, that is showing very clearly the liability to high bacterial contamination from defective udders. For this reason I believe that a physical examination is very important, in order to eliminate defective udders — not only for the protection of

your customers, but for the protection of your herds. It is not only a safeguard against tuberculosis, but other troubles of this kind.

MR. MARSHALL: I should like to say a word about this examination. Our inspector has just returned from inspecting 22 herds. The veterinarian went there and found in seven of those herds, cows of every description, the milk from which ought not to be sent to Rochester. The udders were caked and fevered.

I should like to have it decided about the milk pail. We have been scoring small-top pails, and I want to understand about it so as to be sure just how to score.

MR. DANA: You must give the matter time to get worked out.

MEMBER: How do you score cows where the owner has a milking machine?

DR. WILLIAMS: Just the same.

MR. DANA: Be extremely careful about passing the milking machine from a cow with defective udder on to a healthy cow. We have some work that bears very materially on that.

DEAN COOK: My experience with the open-top pail is that it is not so much the size of the opening as the relationship of the opening to the pail.

MEMBER: Will the state department accept the ruling made by the Health Department of Rochester on scoring?

DR. WILLIAMS: If it did not infringe on the regulations, we would.

MR. DANA: The Department of Health probably will not interfere with the city of Rochester, but if you are dissatisfied with the city Department of Health in any scoring you can appeal to the state department.

DR. WILLIAMS: First-class cities are exempt from the provisions of the law, although Buffalo and Rochester use the same code.

MR. HUSON: I have been requested to announce that at one o'clock, in the room at the other end of the corridor, the discussion of "Horse Breeding Problems" will be continued under the direction of Professor Harper. This afternoon, promptly at two o'clock, is our concluding session. We are to have two excellent addresses — one by Dr. Hills, of the University of Vermont, the other by Professor Sanborn of New Hampshire, on "Permanent Pastures." Let us all be here promptly at two o'clock.

Meeting adjourned.

## FIFTH SESSION

THURSDAY, DECEMBER 17, 2:20 P. M.

Session called to order at 2:20; President Elwood in chair.

### ECONOMICAL DAIRY FEEDING

DR. J. L. HILLS, BURLINGTON, VT.

DEAN, COLLEGE OF AGRICULTURE, UNIVERSITY OF VERMONT

What does the cow do with the food she eats?

This question properly prefaces a discussion of economical dairy feeding. She does three things with it: she maintains her bodily status; she produces milk; and, perhaps, she increases her bodily weight. During her early years she builds as well as maintains her body — bones, muscles, internal organs, skin, horns, hoofs, blood — and lays more or less fat upon her frame; and then, construction being completed, she uses her food in part to maintain its status.

Her body consists of water, ash, fat and protein. The ash is found chiefly in the bones; the fat is interwoven or intermingled within or surrounds the muscular tissues and vital organs; and the muscles, tendons, blood, skin, etc. are mainly proteinous in character.

The foods she eats, whether roughage or concentrate, whether readily digestible or not, are composed of water, ash, protein, crude fiber, starches, sugars and kindred bodies, and more or less pure fats. The ash goes mainly to form bone. The protein is utilized in flesh formation, when supplied in excess for the production of energy, and for the stimulation of milk production. The starches, sugars, fiber and fat are utilized for the production of heat and muscular labor, in the formation of body fat, as a protection of the protein as against a too rapid bodily usage, and in the formation of milk sugar and fat.

The milk thus produced is highly variable in composition, one animal with another, but on the average contains about 13 per cent. solid matter, 87 per cent. water, 4 per cent. fat, 2.5 per cent. casein and albumin, 5 per cent. milk sugar and 0.75 per cent. ash.

Only those food nutrients which are digestible are available for maintenance or production purposes. Digestibility varies in animals according to species and individuality, and in fodders and feeds according to their chemical composition, stage of growth and condition.

It is customary nowadays to measure the food value of a ration in terms both of matter and of energy. Stress is laid more particularly upon the protein content in terms of percentage and upon the energy content in terms of therms, a therm being an amount of heat necessary to raise one kilogram of water  $1^{\circ}$  C. or approximately four pounds of water  $1^{\circ}$  F. Of course only the digestible protein serves in tissue production, the indigestible portions passing from the system by way of the intestines. Similarly the total energy in a ration does not measure the potential bodily production of energy, since more or less is lost in the feces, in the gases from the intestinal canal, in the urine, and is consumed in the processes which serve to make the food assimilable. Hence the true measures of a ration are now held to be the digestible protein and the net available energy. In this connection one should notice the variations between different fodders and feeds as regards the proportions of available energy. The following table indicates in a definite way the fundamental reason why concentrates as a class are more effective than are roughages, and why straw does not nourish life as does corn meal. Note the serious losses in each case. Note, furthermore, the large amount of energy which is lost in the feces in the straw as compared with that lost when corn meal is fed. Note, likewise, the large amounts necessarily lost in production processes.

NET ENERGY DERIVED FROM 100 POUNDS OF PURE NUTRIENTS AND OF THREE COMMON FEEDING STUFFS EXPRESSED AS THERMS.\*

	Total energy. Therms	Energy lost in the feces. Therms	Energy lost in the in- testinal gases. Therms	Energy lost in the urine. Therms	Energy lost in the pro- duction processes. Therms	Total energy lost. Therms	Net available energy remain- ing. Therms
<i>Pure Nutrients:</i>							
Peanut oil (fat).....	399.2	0.0	0.0	0.0	174.4	174.4	22
Wheat gluten (pro- tein).....	263.1	0.0	0.0	49.2	118.3	167.5	9
Starch (carbohydrate)	186.0	0.0	18.8	0.0	68.7	87.5	9
<i>Common Feeding Stuffs:</i>							
Corn meal.....	170.9	15.7	15.9	6.6	62.0	100.2	7
Timothy hay.....	179.3	87.7	6.8	5.5	52.9	152.9	2
Wheat straw.....	171.4	93.9	15.5	4.3	47.4	161.1	1
<i>Common Feeding Stuffs:</i>	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Corn meal.....	100	9.2	9.3	3.9	30.3	58.7	41
Timothy hay.....	100	48.9	3.8	3.1	29.5	85.3	14
Wheat straw.....	100	54.8	9.0	2.5	27.7	94.0	6

\* From Henry's "Feeds and Feeding."

In the formulation of an efficient ration, one should note carefully the variations in the proportions of digestible protein and therms of energy among the sundry roughages and concentrates which are available. One should consider the balancing of rations, determine the amounts of nutrients the animal is likely to require for maintenance and production, and figure out a ration which will furnish a sufficiency of roughages and of concentrates, bearing in mind that the grain ration should be palatable, that it should furnish bulk — weighing roughly a pound to a quart,— that both succulent and laxative feeds should be furnished and that the cost of the ration is an important factor. The following tables show the approximate proportions of digestible nutrients in a pound of dry roughages, succulent roughages and concentrates in common usage.



FIG. 337.—DR. J. L. HILLS



THE DIGESTIBLE NUTRIENTS IN A POUND OF VARIOUS DRY ROUGHAGES (HAYS,  
CORN FODDER AND STOVER, STRAWS)

ROUGHAGES RELATIVELY RICH IN DIGESTIBLE PROTEIN

ROUGHAGES RELATIVELY LOW IN THEIR  
DIGESTIBLE PROTEIN CONTENTS, BUT,  
SPEAKING BROADLY, RELATIVELY CHEAP  
SOURCES OF ENERGY.

	Digestible protein in one pound	Digestible carbohydrates and fat in one pound		Digestible protein in one pound	Digestible carbohydrates and fat in one pound
Soybean hay.....	0.108	0.44	Barley hay.....	0.057	0.46
Alfalfa hay.....	0.103	0.45	Millet hay.....	0.052	0.40
Sweet clover hay.....	0.100	0.40	Hungarian hay.....	0.049	0.50
Rowen (fine).....	0.098	0.45	Orchard grass hay....	0.049	0.46
Oat and pea hay.....	0.089	0.44	Redtop hay.....	0.048	0.49
Clover rowen.....	0.085	0.42	Oat hay (early cut)...	0.048	0.39
Alsike clover.....	0.084	0.42	Oat hay (late cut)...	0.040	0.44
Mixed rowen.....	0.081	0.44	Mixed grasses hay....	0.042	0.45
Red clover hay (in bloom).....	0.077	0.40	Bluegrass hay.....	0.035	0.36
Red clover hay.....	0.071	0.42	Timothy hay (bloom)	0.034	0.47
Mammoth clover hay..	0.062	0.40	Timothy hay (av'age)	0.028	0.45
Mixed grasses and clover hay.....	0.058	0.43	Timothy hay (late cut).....	0.025	0.43
			Timothy hay (ripe)...	0.022	0.43
			Corn fodder.....	0.025	0.35
			Corn stover.....	0.014	0.33
			Oat straw.....	0.012	0.41
			Barley straw.....	0.007	0.43
			Rye straw.....	0.006	0.41
			Wheat straw.....	0.004	0.37

THE DIGESTIBLE NUTRIENTS IN A POUND OF VARIOUS SUCCULENT ROUGHAGES  
(SOILING CROPS, SILAGES, ROOTS, ETC.)

	Diges- tible protein in one pound	Diges- tible carbohy- drates and fat in one pound		Diges- tible protein in one pound	Diges- tible carbohy- drates and fat in one pound
SOILING CROPS					
Green alfalfa.....	0.036	0.13			
Green soybean.....	0.031	0.12			
Green red clover.....	0.029	0.16			
Green peas and oats...	0.026	0.11			
Green oats (in milk)...	0.025	0.20			
Green rye.....	0.025	0.20			
Pasture grass.....	0.025	0.11			
Green barley.....	0.024	0.14			
Green hungarian.....	0.021	0.17			
Green millet.....	0.014	0.15			
Green sweet corn.....	0.012	0.13			
Green fodder corn.....	0.011	0.17			
Green immature corn...	0.011	0.13			
Green oats (early)....	0.011	0.13			
			SILAGES		
			Red clover.....	0.015	0.10
			Mature corn.....	0.011	0.17
			Immature corn.....	0.009	0.13
			Apple pomace.....	0.007	0.18
			Corn stover.....	0.006	0.10
			ROOT CROPS		
			Potatoes.....	0.015	0.16
			Beets.....	0.014	0.10
			Sugar beets.....	0.011	0.09
			Mangles.....	0.011	0.05
			Carrots.....	0.010	0.10
			Rutabagas.....	0.010	0.09
			Pumpkins.....	0.010	0.06
			Wet beet pulp.....	0.005	0.08

## THE DIGESTIBLE NUTRIENTS IN A POUND OF VARIOUS CONCENTRATES

RELATIVELY HIGH IN DIGESTIBLE PROTEIN			RELATIVELY HIGH IN THEIR ENERGY VALUES		
	Diges- tible protein in one pound	Diges- tible carbohy- drates and fat in one pound		Diges- tible protein in one pound	Diges- tible carbohy- drates and fat in one pound
Cottonseed meal (41%)	0.340	0.48	Molasses feeds (rela- tively low grades)...	0.108	0.53
Cottonseed meal (36%)	0.320	0.44	Ground oats.....	0.101	0.61
Linseed oil meal (N. P.)	0.320	0.39	Alfalfa meal.....	0.098	0.41
Linseed oil meal (O. P.)	0.308	0.46	Wheat.....	0.095	0.64
Buckwheat middlings..	0.238	0.52	Oats.....	0.092	0.57
Distillers' dried grains.	0.231	0.65	Rye.....	0.089	0.61
Gluten feed.....	0.204	0.69	Barley.....	0.087	0.69
Brewers' dried grains..	0.191	0.43	Corn and oat feeds (relatively high grades).....	0.079	0.63
Malt sprouts.....	0.176	0.55	Provender ( $\frac{1}{2}$ and $\frac{1}{4}$ )..	0.076	0.63
Molasses feeds (rela- tively high grades)...	0.175	0.54	Hominy feed.....	0.073	0.78
Wheat flour middlings.	0.165	0.63	Corn meal.....	0.061	0.71
Red dog flour.....	0.157	0.43	Corn and oat feeds (relatively low grades).....	0.061	0.64
Wheat brown middlings	0.138	0.56	Oat feeds.....	0.051	0.36
Wheat mixed feed.....	0.131	0.56	Corn and cob meal...	0.044	0.67
Wheat bran.....	0.125	0.47	Dried beet pulp.....	0.041	0.65

Speaking broadly, the dairymen should produce as much of the carbohydrate portion of the ration upon the farm as practicable, and should seek in the market for protein over and above that which is ordinarily grown upon the farm; or, to rephrase this statement, it is well to grow energy to the limit, and to buy, if one buys, protein full more than energy. Among the considerations which should guide one in buying are market prices and to some extent brand names; but primarily one should consider low cost of a pound of protein, low cost of a unit of energy, the proportion of protein to carbohydrates, palatability, healthfulness, effect of the ration upon the character of the product, the bulk of the ration, and manurial values. In the making up a ration, a roughly accurate rule to follow is to feed as much palatable and succulent roughage as an animal will eat clean, together with a grain ration which will weigh roughly one pound to one quart, using one pound

to three pounds of rich or four pounds of thin milk. If hay is the only roughage fed — which is not a desirable practice — perhaps two pounds per 100 pounds live weight may be fed; or if silage is available, one pound of hay and three pounds of mature corn silage to 100 pounds live weight.

What roughages shall be grown?

Roughages form the basis of economical dairy feeding, since they are home grown, economically produced and serve excellently well to give bulk to the ration. Some roughages, especially the legumes, furnish relatively cheap protein; others, notably the grasses, millets, straws and corn, furnish relatively cheap energy nutrients.

Legumes should be grown extensively, for their protein content is high, their tonnage yields are often satisfactory, and their growth tends to improve the soil. Clovers, peas and oats, alfalfa and soy beans seem worth using. The red clover is usually our best legume, all things considered, with alsike a valuable substitute under conditions where red clover does not succeed. It is well understood that both these crops are apt to run out. This is not the place, however, to discuss the soil conditions which are at fault in this matter. Sweet clover, which is not strictly a clover, is easy to grow, is of high food value if cut early, but is decidedly unpalatable if it gets too woody. Peas and oats are an admirable soiling combination, sometimes used for hay, and rarely used as silage. Soy beans have high food values but are not always profitable to grow. They are doubtless best grown in the same row with and ensiled with corn. Alfalfa is well understood to be the most desirable of all dairy roughages. It is, however, a crop which is not well understood by farmers in northern Vermont, but is certainly worth trying in a small way until one learns how to grow it and then is worth trying in a large way. New Yorkers are more successful with alfalfa than Vermonters.

Grasses should be cut early as the proportion of digestible nutrients is greater then than when they are more mature. Timothy makes relatively poor cow hay. Millets and cereals are valuable annuals when cut early. Straws contain fair amounts of total nutrients, but their net available nutrient contents are small almost to nullity.

Corn may be fed as corn fodder, which is a good forage, but of somewhat lower food value than silage; it may be fed as stover, which, as compared with fodder, is somewhat lower in food value; or it may be fed as silage, which furnishes cheap energy and much succulence. Silage is much the best way in which to feed the corn crop.

Roots are highly valued in Europe but cost more to grow, pound for pound of digestible dry matter, than does corn. Large crops may be grown, but they are very watery. Mangels, rutabagas, carrots and turnips — as well as potatoes which are not true roots — may be used for the purpose. Apple pomace is about two-thirds as valuable, pound for pound as is silage.

Among desirable summer soiling crops may be listed rye and wheat sown for spring feeding; clover for use in late June and early July; peas and oats sown at several successive sowings for use in July and early August; cereals grown for use in mid-summer; millets sown in successive sowings for use from August until frost; corn from August until harvest time; rowen for fall usage; and, best of all, mature corn silage fed throughout the season of short pastures, which, all things considered, is the cheapest and most effective soiling crop.

The choice one should make of roughage depends upon the location of the farm, the condition of the land, the supply of available help and the rotation system employed.

What grain feeds shall be bought?

Concentrates are feeds which carry relatively high contents of digestible nutrients in proportion to their weights. In purchasing feed one should endeavor to determine what nutrients are needed to balance the ration, what feeds most cheaply furnish the needed nutrients, and whether the feeds thus selected are adapted to animal needs. For our present purpose concentrates may be divided into feeds furnishing low priced protein, medium priced protein and high priced protein.

Concentrates usually furnishing low priced protein are, stated in the usual order of their protein contents, cottonseed meal, linseed oil meal, distillers' dried grains, gluten feed, brewers' dried grains and malt sprouts. Several of these materials are unpalatable if fed alone, but they work well in mixtures. The purchaser

should observe the guaranty attached to each package, as it is variable for these feeds as a class. Cottonseed meal and linseed oil meal are "heavy" feeds.

Concentrates usually furnishing medium priced protein are, stated in the usual order of their protein contents, high grade proprietary feeds carrying twenty per cent. or more protein guaranty and wheat feeds such as flour and brown middlings, red-dog, mixed feed and bran. These are valuable feeds which offered at reasonable prices.

Concentrates usually furnishing high priced protein are, stated in the usual order of their protein contents, low grade proprietary mixtures guaranteed to carry from eight to fifteen per cent. protein, composed of low grade by-products or cereal feeds, and often made more palatable by the use of greater or less amounts of molasses; corn and oat feeds; cereal grains, such as corn, oats, barley, rye and buckwheat, valuable when home grown (corn meal usually furnishes the cheapest energy nutrients in concentrates); dried beet pulp, often a desirable feed, but usually offered at a high price as compared with the nutrients it contains; alfalfa meal, a high priced hay feed, the food value of which is not measurably increased by fine grinding.

In buying concentrates, one should note the guaranty and ingredient statements full more than names, catchy advertising or apparent low prices. One should read the Experiment Station bulletins discussing feeding values and economy of purchase. When in doubt, advice may be sought of the Extension Service or of the Experiment Station officials, or of the county agricultural agent. And it is worth while to consider cooperating with one's neighbors in order to buy in large quantities, thus saving money.

### IMPROVEMENT OF PASTURES

J. W. SANBORN, PITTSFIELD, N. H.

When an ancient Jewish writer desired to picture a state of ideal happiness for the pastoral people to whom he spoke, he likened it to the condition of flocks led into "green pastures." Green pastures, luxuriant and composed of mixed herbage, has long been popularly regarded as supplying the ideal stock feed, both in point of economy and efficiency. Strictly good pastures

are but a reminiscence. Time was when the farmers wintered their cattle indifferently and depended on the fresh pastures to make a rapid growth and to fatten quickly and well. Now, good feeders make a better growth in the winter than in the summer, and depend on grain feeding when the better class of beef or the best flow of milk is to be gained and continued.

When a resident of the blue-grass section of Missouri, I was told of pastures that would make their three pounds of growth per day for fattening steers, when supplemented with grain, and more growth was not uncommon, passing 100 pounds per month. The grain added something to the growth, no doubt, but was used more for the purpose of securing quality than quantity. A good Leicestershire pasture in England excels this record. Age has told adversely on the pastures of New England, and Nature, in her efforts to keep up an equilibrium, rotates crops by growths of weeds and brushes. These are accompanied by shade that impairs the growth of grass and injures its quality, for crops in the shade are inferior in palatability and nutritive value. The grasses in an old pasture are apt to be of the inferior sorts low in palatableness, therefore eaten in less quantity and having inferior growing capacity. This trouble is accentuated by the labor essential to secure the needed bodily requirement. In New Hampshire it will require at least five acres to carry a cow for but a part of the season, and a tedious day's labor to secure a living. This all means low milk flow except in the month of June. Here you have better pastures, yet of reduced capacity and quite below the standard that should be set.

The decline of our pastures is one of the important factors that has had to do with the decline of farm values, the departure of the old farm families to other industries and locations, and the general dissatisfaction with agriculture as a vocation in the East. Pastures are a marked illustration of the power of habit and the influence of a name. We are content to accept from pastures a carrying power of a cow half fed on three to six acres during four or five months, said cow giving but a partial fraction of what might be secured if rightly cared for. If we reduce the full carrying power of an acre for a full year, we find that it requires

for the average pasture of the East, including New England, ten to twelve acres. The higher type of farming now aimed at asks each acre to carry a cow a full year, exclusive of grain. Under the latter system the cow is highly nourished with little effort and can turn her power to production. On many farms, probably the majority, the carrying capacity of an acre in pasture could be multiplied at least eight to ten times. Granting this, light is thrown upon the fact that our farms are believed to be inadequate to give the income required to maintain the modern farm family in accordance with the standards of living prevailing in our cities, and with the desires of our sons and daughters. Farms should give the standard of living demanded by the times and the culture and opportunities of the age, otherwise farming as an industry will be left to men of inferior ambition.

The trouble with the times in its relation to farming is to be looked for largely in ourselves. The rapid settlement of the West and its flood of cheap food discouraged us. We drew in on tillage crops, the application of capital, labor and plant food, pursued a passive type of farming, increasing our pasture area and permitted these pastures to slide down the plane of fertility without an effort to maintain them. The effect of this was a narrowing income in an age of expanding expense account. The fixed charges of the farm grew and grew, especially the family expense, until the cost of labor, fertilizers, grain, machinery and buildings, came to equal the gross receipts, and at last failed to leave a margin adequate to give the type of living and the dollars over for a rainy day that farmers felt was their need and due. The remedy for this state of affairs is an enlargement of income. This will come and come readily by deepening the processes of the farm, but more especially by broadening its efforts. Every acre should be laid under the fullest powers of the mind and capital of its owner. No place offers such opportunity for expansion as these passive pasture acres; they at once admit of more than doubling the income, indeed, of tripling and often quadrupling the gross receipts of the farm. Hence it is that I feel that the weak spot of the farm is the pastures.



**FIG. 338.—**PROFESSOR J. W. SANBORN



Probably one of the most important losses due to poor pastures is generally unobserved. Everyone is cognizant of the lessened milk flow that begins in the month of July and continues until the cows come to the barn. Few keep the milk flow up to the normal of good winter conditions or those of June. Pasture appears to be so much cheaper than grain, that there is a reluctance to feed grain, and most farmers hesitate to go to the mows in which is stored the winter's supply of food. There is so far an appearance of saving by this policy, that the practice of enduring fading pastures is a common one rather than the exception.

But during this poor pasture period, ending in late fall months, and of insufficient feed, something else is being lost other than milk. The scales, if used, would show a continuing loss in the weight of the cow. This means much. Not only has a thousand pounds of milk been the forfeit, but this continuing loss is one that must be returned to the cow before she can renew her normal milk flow, which will not be until after calving. The loss of milk flow, accompanying the loss of weight, will be continued, though in a lessening degree, until the full loss of 100 to 150 or more pounds of weight is restored. The most careful experiments in stock feeding show that under the best conditions it requires ten pounds of food to make a pound of growth. Thus a thousand pounds or more of food must be fed in the barn before the cow has returned to her normal weight and stored up the energy for a full milk flow. Nothing has been saved, then, by short pastures or by withholding food at the barn during short pasturage. On the contrary, the lessened milk flow during the short pasturage has not been made up, nor could it possibly be made up, since the period of drying preceding another calving is attended by a naturally decreasing milk flow. Our poor pastures are at the root of much of the short milk production for which the average herd is credited, and, as stated, it is the chief factor in the low income that has made farming unpopular.

There are several methods of pasture improvement that I shall briefly discuss, but I desire to state at the outset that there is one royal road to pursue when it is possible. Every acre of the pasture that can well be made subject to the plow should be forced to give the full return of that field area by being placed in the

regular crop rotation. This is my course. It involves, of course, more cost, but this is warranted by the greater productivity and also by the fact that ground that is grazed will not carry as much stock as ground from which field crops are harvested. At the Utah Experiment Station I fed three lots of steers on three equal areas. One lot was grazed, one was cut and fed green in the stable, and the other was cut, dried and fed in the stable. The lot that was grazed required 28 per cent. more area to carry the stock a given time than the other two; or to put it in another form, the section that was cut and fed in the stable had 1,481 pounds of food remaining when the grazed lot was exhausted. This factor may not be the deciding one, but coupled with the greater productivity of a pasture kept under manures in a regular way, it has a marked bearing on the problem. At the end of an eight-year rotation, the pasture is grazed for eight years. At this date, the 8th of May, I have had 43 cows daily on 41 acres since the first of the month, and there is now an excess of food on the ground.

Land can be made to carry a cow to the acre for the months of the grazing period, and of course so carry her as to give better results than can be secured by the use of several poor acres for each cow; but a cow to the acre for five or six months is not satisfactory, nor is it the capacity of an acre under cultivation. As a second method, pastures can be treated with yard manure. This method has not been regarded feasible here in the East, since there is not usually enough produced to give the fields adequate fertilization, but they can be made productive by the use of fertilizers and kept so permanently. The continual droppings of stock on pastures, together with the natural decomposition constantly going on in the soil, represent nearly all the fertility taken from them yearly; there is but a small deficit to make good. It is the yearly accumulation of this annual deficit for a long period that has placed our pastures where they are, short in production and in the quality of that produced. With the fathers this loss was less than now, because they fed more for beef and the grazing was accompanied by the offal at all times. The stabling of cows carries more from

the pastures than beef animals, and the loss is of a different character.

The carcass of an ox contains, per 1,000 pounds, 17.6 pounds phosphoric acid, but only 1.6 pounds potash or one-tenth that of the phosphoric acid. Milk is .19 per cent. phosphoric acid to .18 per cent. of potash and .53 per cent. of nitrogen. Into milk goes but one-sixth of the nitrogen of the food, one-fourth of the phosphoric acid and one-tenth of the potash. It will be seen that the fertilizing minerals taken from the soil by grazing steers is almost nothing, not more probably than the annual amount supplied by soil decomposition; but there is a continual loss of phosphoric acid, a material less in quantity in the soil by one-half than potash. Old pastures are minus phosphoric acid to a marked degree, and fertilization for them calls for the use of this material. This is why the early use of bone meal on English pastures gave very satisfactory results. I endeavor to use for my pastures a fertilizer containing a little less than one-half the nitrogen which would be applied for field grass, since the droppings afford some nitrogen, while nature by various processes is providing more of this material than of phosphoric acid. Where cows are pastured, I use some potash, especially for river soils. Distinctively, pasture fertilization should consist of the free use of phosphoric acid, but this material should not come too freely in the form of soluble acid or acid phosphate, since too much of it is not good for grass. On a humous soil, or on an acid soil such as I have, floats are successful and have the merit of decided cheapness. The English and German custom of using basic slag for acid soils is the best practice for securing phosphoric acid; the lime in it tends to sweeten the soil and bring in clover, which is so desirable for pastures. As a source of nitrogen, nitrate of soda (unless it is used as an annual application) should be avoided for it is soon gone. My practice shows that it is better applied twice — in the spring and at mid-season.

The amount of fertilizer to be used to the acre will be determined by the condition of the soil. For improving poor pasture, it is well to use a half ton. On sour soils this had better be mainly basic slag, with 100 pounds sulphate of potash, 200 pounds fine ground tankage and 50 pounds nitrate of soda. What

little nitrogen supply is required should come as an annual supply or, in case of the free use of tankage, once in two years. After the first heavy supply, annual applications need be but small in amount, which can be determined best by observation of the individual pasture. Few will care to make yearly use of fertilizers for pastures. On alkaline pastures, bone meal, although this form of phosphoric acid comes high, and muriate of potash may be used instead of basic slag and sulphate of potash.

The partial fertilization of a pasture will compel its full fertilization. Cows will graze close where fertilizers are used. The palatableness of the grass is much improved by fertilization and, better still, the kind of grasses growing will gradually change. I find it to vary under differing methods of fertilizing.

Pastures may be improved and finally made rich by feeding from the barn in part or, in case of growing or fattening stock, by feeding while in the pasture. This practice is still in vogue in the rich blue-grass pastures of Missouri, where for a time I was familiar with beef growing. There I have seen corn constantly before the steers in large troughs from which they fed at pleasure. The literature of pasture feeding with reference to the fertility accruing to pastures is fairly rich. I have not the data with me, but I am familiar with many tests of the relative fertility of pastures on which sheep or bees have been fed various foods. These trials not only show that pastures on which grain feeding has occurred are richer than those on which it has not been practiced, but that the fertility or carrying capacity for stock is greater after some foods than others. Cottonseed meal, as might be expected, adds more to the pasture than other foods.

The rotation of crops with pasturage, as before noted, makes feeding at the barn compulsory, both for grain and coarse foods. This practice will by patience restore pastures to more than their pristine fertility and carrying capacity, and it has also other recommendations than restoration of fertility. It keeps up the milk flow of the summer season so far as food in plenty can do so. It is better to give some dry food at the pasture rather than all green food, as it keeps the bowels in better condition and the flow of milk more regular.

It is well known that in England, where are some of the best pastures in the world and the best cared for, it is the custom to use mixed grasses for grazing. English agricultural papers carry advertisements of pasture mixtures, and much is made of the practice of right combinations of pasture varieties. For a century or more, the literature of pasture seeding according to the English system has been advocated, and some of our seedsmen offer mixtures, yet the practice of reseeding pastures and with special mixtures is not common in this country. Those who have tried commended mixtures report that in our climate but a very few varieties are lasting under grazing.

One of the good effects of rotation of field crops with pastures will be found in the fact that for a season we may deal safely with very productive grasses. For permanent pastures I do not hesitate to commend mixtures. In New York State where seeding is being done for permanent pasture, the following mixture proved a good one:

	Pounds per acre
Red clover .....	4
Alsike clover .....	3
White clover .....	2
Timothy .....	8
Redtop (re-cleaned) .....	5
Kentucky blue grass (re-cleaned) .....	5
Orchard grass .....	2
Meadow fescue .....	2

The following pasture mixtures are also recommended:

*For Heavy Ground*

	Pounds of seed
Kentucky blue grass .....	25
White clover .....	10
Perennial rye grass .....	30
Red puccue .....	10
Red top .....	25

Sow 35 pounds per acre.

*For Lighter Soil*

	Pounds of seed
Canada blue grass .....	5
Red clover .....	5
Orchard grass .....	5
Tall oat grass .....	5
Perennial rye grass .....	20
Red top .....	35

Sow 40 to 45 pounds per acre.

It scarcely need be said that a new pasture sward should be grazed the first year, the formation of a mat and the thorough rooting of the grasses should be allowed. It is now being shown that over-grazing is a bad practice, and that it is especially so when the pasture is left closely grazed at the end of the season. We know this with regard to meadows, but somehow think that pasture grasses are not subject to the same laws of plant life. To a great degree the principle applies to pastures as well as to fields. It is better for the stock to have some material left over for early spring and so have a mixture of the old and new, avoiding in some measure the scouring caused by going at once from dry to green food. Limited use of pastures permits feeding a little later in the fall and a little earlier in the spring. In the western state to which I have alluded, it is common to hold ungrazed or lightly-grazed areas for so-called winter pasture. This enables late and early pasturing.

I am often asked what shall be done with those pastures that are too rocky to plow and reseed, and that, of course, cannot be placed in the rotation with fields. Vegetation to a large and remarkable degree follows the method of fertilization. Some pastures run to June-grass, others to clover, others to timothy and others again to redtop. Bushes and weeds must go as the first requisite to a decent pasture. They not only rob the pasture, but shade it and give poor, watery, sour grasses. Cut and keep cutting them and sow fertilizers liberally. This will induce the growth of grasses and the crowding out of these pests of the pasture. Cows will, as all observers know, nip at the bushes and occasionally at weeds; between the fertilizers, the cow and the scythe, a good pasture will result in time.

#### REPORT OF THE VI INTERNATIONAL DAIRY CONGRESS

DR. ROBERT S. BREED, GENEVA, N. Y.

The Sixth International Dairy Congress at which I had the honor of representing the New York State Dairymen and, thanks to the courtesy of Commissioner Huson, likewise the honor of representing this great dairy state, was held at Berne last June. Before telling you of the Congress, I wish to explain something of the nature of these congresses, the reason for their existence and why they are worthy of your attention.



FIG. 339.—DR. ROBERT S. BREED



Fifteen years ago a group of European dairymen, largely from the countries of Belgium, France, Holland and Denmark, gathered in Brussels and formed a permanent organization known as the International Dairy Federation which took upon itself the organization of the six International Dairy congresses which have since been held. Apparently the chief cause of the formation of this federation was the close inter-relationship of the commercial dairy interests of Europe. The continental dairymen had discovered that, in order to secure good prices for their products in the English markets, they must standardize their products. Soon after the organization of the federation, they succeeded in securing the cooperation of sixteen European countries, the Argentine Republic and the United States.

National committees were formed in each country. The committee for the United States was formed of sixteen members by Chief Alvord, at that time in charge of the Dairy Division at Washington. This society was represented on the committee by Mr. Geo. A. Smith, at that time the president of the society. With Chief Alvord's death, the committee lost interest and became inactive. When Chief Rawl attempted to revive it in order that American dairy interests might be properly represented in international councils, he found his way blocked. Some congressman had tacked a rider to the appropriation bill prohibiting the participation of the United States in any international movement of this sort without the consent of congress. When the matter was taken up with them, they were too busy to listen to American dairy interests and failed to act on the request. As a result, European dairymen feel toward us about as the Californians feel toward the nations who have refused to participate in the Panama Exposition.

A movement is now underway, about which you will hear more later, which is attempting to correct this misunderstanding and to secure for American dairymen the recognition which they deserve in international councils. There is hope that an invitation will be issued for the Eighth Congress to meet in America in 1920, the plan to secure the Congress in 1917 having failed. The Seventh Congress will be held in Copenhagen under the auspices of the Danish government, and will have much of interest for any of you who may be in a position to attend.

The chief work of the Congress thus far has been in formulating methods of analysis and standards for the control of cheese and butter. The control of market milk has likewise occupied their attention, especially in recent years, and a report was made at the Berne Congress which outlined the regulations which were considered necessary in this control. It is interesting to note that the underlying principles of those recommendations showed some marked differences from those which we discussed this morning. Inasmuch as this problem is in reality the same the world over, the European methods of control are worthy of our study at least. The same is true of many other dairy problems. There is apparently no question but that the butter and cheese control of Denmark and Holland is better than that of other countries. If we can bring European dairymen to America in any large number, we can learn much from them. American dairymen can give them some suggestions as well, and perhaps can prove to them that some of our dairy products are of as high a quality as any of theirs; and in the case of some of our market milk, I believe, far superior.

There were about 800 members of the Congress at Berne who represented practically every civilized country of the globe. The handicap of many languages was well handled at this Congress as it has been at every congress. All papers are short and must be presented before the Congress meets, in time to allow them to be printed in three or four languages. At the sessions these papers are given in abstract only and any one of three languages is permitted in the discussions. Prof. Böggild assured me that at the next Congress the chief language used would be English and that the time of the Congress would be made such as would favor the attendance of Americans.

After the Congress we were given the chance to see Swiss dairying in a way which would never have been possible for the private individual. Excursion parties were formed which were taken to the best of the Simmenthal and Brown Swiss breeding farms, to condensed milk and milk powder factories, to cheese and butter factories, to milk chocolate factories, to their chief dairy schools, experiment stations and the like. The courtesies of life were not forgotten either for we were royally entertained and taken through the finest of the mountain districts as well as through the agricultural section of Switzerland.

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